



Entered at Stationers' Hall.

ESTABLISHED 1859.

Registered for Foreign Transmission.

VOL. XXI. No. 2. [PUBLISHED MONTHLY.]

FEBRUARY 15, 1879.

{ SUBSCRIPTION, 10s. PER ANNUM,
INCLUDING DIARY, POST FREE.
SINGLE COPIES, 1s. EACH.

CORBYN, STACEY & COMPANY,
WHOLESALE AND EXPORT DRUGGISTS, MANUFACTURING PHARMACEUTICAL CHEMISTS

See Page 71.



CHAULMOOGRA OIL.
LIEBREICH'S SYRUP OF CHLORAL.
DAMIANA-LIQUID EXTRACT.
LIQUOR PHOSPHORI.
PHOSPHORUS PERLES.
TROCH. EUCALYPTI CO.
LIQUOR FERRI DIALYSATUS.
VALENTINE'S MEAT JUICE.
ALL NEW REMEDIES.

NDILO OIL.
LIEBREICH'S PEPSIN-ESSENZ.
COCA-LIQUID EXTRACT, TINCTURE,
WINE.
SYRUPUS PHOSPHORI.
SANDAL WOOD OIL PERLES.
EXTRACT OF MALT AND COMBINATIONS.
SYRUPUS FERRI DIALYSATUS.
ALL NEW PREPARATIONS.

GENERAL PRICES CURRENT FOR THE HOME OR EXPORT TRADE ON APPLICATION.

300 HIGH HOLBORN, LONDON, W.C. Telegram Address from Abroad CORBYN, LONDON.

TRADE



MARK.

HOOPER'S

BRIGHTON SELTZER,

Per 2s. 6d. doz.

SIX DOZEN CARRIAGE FREE.

Special Terms for Quantity.

HOOPER AND COMPANY.,

Manufacturers and Importers of Mineral Waters,

7 PALL MALL EAST, LONDON.

MAY & BAKER

MANUFACTURING CHEMISTS,
BATTERSEA, LONDON, S.W.

MEDALS—1851, 1855, 1862, 1867.

WHOLESALE AND EXPORT ONLY.

MAKERS OF

BENZOIC, GALLIC, PYROGALLIC,
AND ALL PURE MINERAL ACIDS.

(PURE) **ETHERS** (METHYLATED)

For Anaesthetics, Photography, and Ice Making.

BISMUTH PREPARATIONS,

SOLUTION OF AMMONIO-CITRATE OF BISMUTH, P.B.

All free from Silver, Lead, Arsenic, &c., &c., &c.

CORROSIVE SUBLIMATE,
RED AND WHITE PRECIPITATE,
PURE CALOMEL,

AND EVERY MERCURIAL PREPARATION.

CONCENTRATED FRUIT ESSENCES AND FLAVOURS.

RASPBERRY ACID.

SULPHITES and BISULPHITES of LIME, MAGNESIA,
POTASH, and SODA.

CYANIDES OF POTASSIUM,

For Gold and Silver Plating and Photography.

LIQUID AMMONIA, .880.

REFINED CAMPHOR.

AND ALL DESCRIPTIONS OF CHEMICALS FOR MEDICAL, PHOTOGRAPHIC,
ANALYTICAL, AND GENERAL USE.

**MAY & BAKER'S MANUFACTURES MAY BE ORDERED THROUGH
ANY LEADING WHOLESALE HOUSE.**

LEATH & ROSS'S HOMŒOPATHIC PHARMACIES,

9 Vere Street, W., and 5 St. Paul's Churchyard, E.C.,

LONDON.

SOLE PROPRIETORS OF THE

Doré Transparent Glycerine SOAP.

(REGISTERED.)

Size D 1, 2d. Tablets.

| | | | | | | | | |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-------------|
| In Wood Boxes of 3 dozen each | ... | ... | ... | ... | ... | ... | ... | 15/- gross. |
| " " 6 " " | ... | ... | ... | ... | ... | ... | ... | 14/- " |
| In 6d. Boxes, 3 Tablets in a Box | ... | ... | ... | ... | ... | ... | ... | 4/- dozen. |

Size D 2, 3d. Tablets.

| | | | | | | | | |
|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-------------|
| In Wood Boxes of 3 dozen each | ... | ... | ... | ... | ... | ... | ... | 23/- gross. |
| " " 6 " " | ... | ... | ... | ... | ... | ... | ... | 22/- " |
| In 9d. Boxes, 3 Tablets in a Box | ... | ... | ... | ... | ... | ... | ... | 6/- dozen. |

Size D 3, 4d. Tablets.

| | | | | | | | | |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-------------|
| In Wood Boxes of 3 dozen each | ... | ... | ... | ... | ... | ... | ... | 31/- gross. |
| " " 6 " " | ... | ... | ... | ... | ... | ... | ... | 30/- " |
| In 1/- Boxes, 3 Cakes in a Box | ... | ... | ... | ... | ... | ... | ... | 8/- dozen. |

Size D 4, 6d. Tablets.

| | | | | | | | | |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-------------|
| In Wood Boxes, 3 dozen in a Box | ... | ... | ... | ... | ... | ... | ... | 46/- gross. |
| " " 6 " " | ... | ... | ... | ... | ... | ... | ... | 45/- " |
| In 1/6 Boxes, 3 Cakes in a Box | ... | ... | ... | ... | ... | ... | ... | 12/- dozen. |

BARS, 5/6 and 11/- per Dozen.

(Packed in Boxes of 3 dozen small, or 1½ dozen large size.)

SHAVING STICKS, in neat foil-lined cases, 4/6 & 9/- per doz.) Retail,
SHAVING CAKES, in neat foil-lined cases, 4/6 & 9/- per doz.) -/6 & 1/-.

N.B.—5 per cent. Discount for Cash with order from above Prices.

THE HIGHEST HONOURS AWARDED AT
PHILADELPHIA, 1876. — AMERICAN INSTITUTE, 1877. — PARIS, 1878.

PETROLEUM **VASELINE** JELLY.

Is an absolutely Pure Jelly of Petroleum, refined by a new process, in which no chemicals are used. It contains no Paraffin or admixture of any kind. Universally regarded as the best basis for Ointments, because it is the *only* substance that will not either crystallise, oxidise, or become rancid. It defies decomposition, is entirely without odour or taste, and after having been liquefied it regains all its primitive properties on cooling.

As an Emollient it has no rival, as it is the only known substance which will not irritate the skin.

Not being a distillate of Petroleum, it is perfectly harmless when introduced into the system.

Endorsed by the entire Medical Press and Profession, and in general use in Hospitals, Dispensaries, &c., throughout the World.

Pamphlets containing original articles from distinguished Members of the Medical Profession and Pharmacists, with Prescriptions and Formulas, post free.

**We beg to call attention to the following Net Price List
of our Vaseline Preparations:**

| | | | |
|------------|-------------------------------------|---|--|
| REGISTERED | VASELINE FOR MEDICINAL USE | { | Bottles, in fancy card cases, 3 sizes, 8s., 16s., and 33s. per dozen; in boxes (wood) of 1 dozen and of $\frac{1}{2}$ dozen. |
| | POMADE VASELINE FOR THE HAIR | | |
| | VASELINE COLD CREAM . . . | { | Glass Pots, 2 sizes, 8s. and 16s. per dozen; in boxes of 1 dozen and of $\frac{1}{2}$ dozen. |
| | VASELINE CAMPHOR ICE . . . | | |
| | VASELINE TOILET SOAP . . . | { | Fancy Paper Boxes, 8s. per dozen; in boxes of 1 dozen. |
| | VETERINARY VASELINE . . . | | |
| | | { | 9s. per dozen Tablets, less 15% discount; in boxes of 3 tablets. |
| | | { | 1-lb. Bottles, 24s. per dozen; in boxes of $\frac{1}{2}$ dozen. |

For the convenience of Chemists in Dispensing, &c., Vaseline is put up in 1-lb. tins, 2s. 6d., and 5-lb. tins, 2s. 3d. per lb., and the Veterinary Vaseline, in 5-lb. tins, at 9s. per tin—Packages included.

Our Name and Registered Trade Mark is on every label and package.

All the above articles can be obtained of Messrs. Maw, Son & Co., and all Wholesale Houses in London; Messrs. EVANS & Co., of Liverpool; FERRIS & Co., Bristol; HATRICK & Co., NEW APOTHECARIES' Co., and BROWN BROS., Glasgow; MACKAY & Co., Edinburgh; BOILEAU & BOYD, Dublin; CLARKE & McMULLAN, Belfast; and of the Manufacturers.

MANUFACTURED ONLY BY THE
CHESEBROUGH MANUFACTURING CO. (NEW YORK),
7 SNOW HILL, LONDON, E.C.

NOTICE.—Paraffin adulterations and imitations of Vaseline can be readily distinguished by their odour, taste, and their grainy or crystalline structure, which is very evident to the eye when compared with the jelly-like smoothness of Pure Vaseline.

SILVER MEDAL.

SOLE MANUFACTURERS AND PROPRIETORS OF

PARIS, 1878.

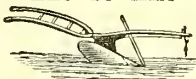


JUJUBES,

BY HAWKER'S PATENT PROCESS.

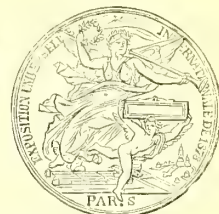
A. & H.

TRADE



MARK.

A.D. 1715.



The merits of these articles have now become widely known. Prepared by this process Jujubes are rendered less adhesive, much brighter in appearance, and may be kept for long periods without change.

| | | | | | |
|---------------|-----------|--------------|-----------|-----------|----------|
| BLACK CURRANT | LICHEN | MIXED FRUITS | PECTORALE | RASPBERRY | TAMARIND |
| GLYCERINE | LIQUORICE | MAGNUM BONUM | PINE | ROSE | VOICE |

2/- per lb., or in tin boxes, 6d. size, 4/-; 1/- size, 8/-.

All the above Tins are neatly wrapped ready for sale. The One-Pound Tins are returnable at 6/- per dozen.

GLYCERINE, VOICE, TAMARIND (and all other) PASTILLES, 2/2 per lb.

Or in 6d., 1s., and 1-lb. tin boxes, 4/4 and 8/6 per dozen.

GUIMAUVE.....2/6 per lb., in 1/- and 1 lb. tin boxes, 8/- per dozen.

DELECTABLE.....2/4 per lb., or in 6d. and 1/- tin boxes, 4/4 and 8/6 per dozen.

CRYSTALLIZED FRUIT PASTILLES.....2/- per lb. | CRYSTALLIZED JUJUBES (Mixed).....1/8 per lb.

HANDSOME NEW UPRIGHT SHOW CASES.

The frames are fitted with Glass Shelves, Silvered-glass Backs, and are lettered in Gold; to display three kinds of Jujubes or Pastilles. Price 17/6 each. Size, 21 in. high, 10 in. broad, and 8 in. deep.

ALLEN & HANBURY'S,

WHOLESALE DRUGGISTS, MANUFACTURERS OF PHARMACEUTICAL PREPARATIONS, &c.,

PLOUGH COURT, 37 LOMBARD STREET, LONDON, E.C.

General List of Drugs, Chemicals, &c., posted free on application.

F. A. SARG'S SON & CO.'S

CHEMICALLY PURE GLYCERINES

AND

TOILET GLYCERINE ARTICLES.

CHEMICALLY PURE GLYCERINES.

Sarg's Double Distilled Glycerine, Chemically Pure,

30° Beaumé, in Cases of Four 56-lb. Tins each; Twenty 5-lb. Bottles, Fifty 1-lb. Bottles, and 100 ½-lb. Bottles, with Registered Label.

Sarg's Double Distilled Glycerine, Chemically Pure,

In ½-lb. and 1-lb. Bottles, should have a place in every nursery on account of its salutary action on the heads of children, relieving them from dandruff and the roughness of the scalp they are so commonly subject to.

Sarg's Distilled Glycerine, Chemically Pure, P.B.,

29° Beaumé, in Cases of Four 56-lb. Tins each.

Crude Glycerine, in Bulk.

TOILET GLYCERINE ARTICLES.

Transparent Glycerine Soap,

In registered Packets of three Tablets, 1s. Warranted to contain 33% of the purest Glycerine. Also in round Tablets, three in a Box; and in oval Tablets in paper.

Liquid Glycerine Soap,

Best preventive against chapped hands, 1s., and unrivalled for imparting softness to them, and rendering them clean and white. See Testimonials of Professor J. von Liebig, Baron; and of Professor F. Wöhler.

Sarg's new Carbolic Glycerine Soap,

In Boxes of three Tablets, is highly recommended as a most effective disinfectant.

Scented Glycerine,

In Bottles at various prices. Either pure or diluted with water, this Glycerine is very successfully used for softening the skin, preserving the complexion, and preventing the very unpleasant roughness of the skin in cold weather.

Glycerine Cream

Is quite unequalled for imparting a fresh and healthy colour to the lips and keeping them from chapping.

Sold by all Wholesale Chemists and Druggists.

Sole Wholesale Agents for the United Kingdom:

SCHMEDES, ERBSLOH & CO. (IMPORTERS OF CHEMICALS AND DRUGS), 6 CASTLE STREET, FALCON SQUARE, LONDON, E.C.; AND MELBOURNE AUSTRALIA.

RENEW YOUR EBONISED SHOP-FITTINGS
AND
COUNTER CASES **JUDSON'S** AND CARRIAGE LAMPS.
"ARTISTS' BLACK,"
OR
EBONY ENAMEL.

Applied with a soft brush it imparts a rich lustrous Black Polish to any hard substance, and dries in a few minutes. Ornaments may then be picked out with "Judson's Gold Paint." The expenditure of a few shillings and a little labour will be amply repaid by the result.

PRICE { 8s. per dozen Bottles and Brushes, } Retail at 1s.
each in a separate Box

Picture Frames in Black and Gold look very Handsome!

JUDSON'S GOLD PAINT, 1s. 6d., 12s. doz.; 3s. 6d. (equal to four at 1s. 6d.), 28s. doz.

DANIEL JUDSON & SON, 77 Southwark St., LONDON.

FERRIS & COMPY'S
PURE THYMOL SOAP,
PREPARED FROM
THYMOL, THE NEW ANTISEPTIC AND DISINFECTANT.

THYMOL, a newly-discovered Crystal prepared from Wild Thyme (*Origanum Vulgare*), is pronounced by some of the most eminent Chemists and Physicians in Europe to be far superior to, and stronger than, Carbolic Acid, Coal Tar, or any other of the Antiseptics and Disinfectants hitherto known. It has been shown by the experiments of LEWIN and BUCHOLTZ to be about eight times as powerful as Carbolic Acid.

It has also the very great advantage of being **QUITE HARMLESS**, and possesses the **DELICIOUS** and **FRAGRANT ODOUR** of WILD THYME.

FERRIS & COMPY'S PURE THYMOL SOAP,

Manufactured by them with their Pure Crystals of Thymol, is confidently recommended as one of the very best and most elegant Soaps ever introduced to the Public.

It is adapted for the **TOILET** as a **SKIN SOAP**, as an **ANTISEPTIC SOAP**, and **FOR GENERAL FAMILY USE.**

An easy test of its effectiveness is, that it at once and completely removes the odour of Tobacco Smoke.

See that each Cake bears our registered Trade Mark.

Sold in Tablets, 6d.; or in Boxes, containing 3 large Tablets, 1s 6d. per Box.

SOLE MANUFACTURERS—

FERRIS, BOORNE, TOWNSEND & BOUCHER,

Wholesale and Export Druggists and
Chemists to the QUEEN,

BRISTOL,

And may be procured through all
Chemists.

LONDON AGENTS—Messrs. LYNCH & Co., 171A Aldersgate Street, E.C.; Messrs. WM. EDWARDS & Son,
157 Queen Victoria Street, E.C.

IMPORTANT NOTICE TO THE TRADE, 1879.

PRIZE MEDAL,



LONDON, 1862.

PRIZE MEDAL,



PHILADELPHIA, 1876



LOW'S FRENCH EXTRACTS, &c., viz.:

| * per lb. | | | | per lb. | | | | per lb. | | | |
|----------------------|-----|-----|-----|------------------|-----|-----|-----|----------------|-----|-----|------|
| Ext. Cassie | ... | ... | 9/6 | Ext. Rézeda | ... | ... | 9/6 | Ext. Tubereuse | ... | ... | 9/6 |
| „ Jasmin | ... | ... | 9/6 | „ Rondeletia | ... | ... | 8/- | „ Violet | ... | ... | 11/6 |
| „ Jonquil | ... | ... | 9/6 | „ Rose | ... | ... | 9/6 | „ Verbena | ... | ... | 8/- |
| „ Lily of the Valley | ... | ... | 9/6 | „ Rose Geranium | ... | ... | 9/6 | „ White Rose | ... | ... | 10/6 |
| „ Magnolia... | ... | ... | 9/6 | „ Spring Flowers | ... | ... | 9/6 | „ White Lilac | ... | ... | 9/6 |
| „ Orange Flower | ... | ... | 9/6 | „ Stephanotis | ... | ... | 9/6 | „ Wood Violet | ... | ... | 11/6 |
| „ Patchouli | ... | ... | 9/6 | „ Sweet Briar | ... | ... | 9/6 | „ Wild Rose | ... | ... | 9/6 |
| „ Queen of the Alps | ... | ... | 9/6 | „ Tea Rose... | ... | ... | 9/6 | „ Ylang Ylang | ... | ... | 9/6 |

ARE NOW REDUCED IN PRICE, AS ABOVE.

For NEARLY 40 YEARS these EXTRACTS have borne the HIGHEST REPUTATION both for PURITY AND STRENGTH, and a trial is requested by all who have not used them. They are guaranteed to be AS FINE AS CAN BE PRODUCED AT ANY PRICE, and are only REDUCED IN PRICE consequent upon the increasing demand, and in competition with the many that have recently been put before the Trade of more or less doubtful merit. The Proprietors are confident, from their long experience, that they will compare favourably with any in the market, and that they will meet with the increased patronage they deserve.

R. LOW, SON & HAYDON,

Perfumers, Toilet Soap Makers, and Brush Manufacturers.

330 STRAND (OPPOSITE SOMERSET HOUSE) LONDON.



SODA v. POTASH.

A TRADE DIALOGUE.

SCENE: THE SHOP OF A CHEMIST.

SPEAKERS { The Chemist.
A Partner in the late firm of Bollmann Condry & Co.

Chemist.—I see it is stated with much emphasis, in an advertisement, by one of the Partners in the late firm of Bollmann Condry & Co., that "Condy's Fluid is not, and never was, composed of Permanganate of Potash." The article being patented the specification ought to determine that point; and you, having been also a Partner in the late firm, must of course be acquainted with its terms. How was the invention described?

Partner.—You are quite right. Not only was there a Patent, but the word "Patent" has always been put in the title on the labels, so that the correct name of the article is not Condy's Fluid, but "Condy's Patent Fluid." The Patent was for the use of Manganate and Permanganate of Potash or Soda as purifying and disinfecting agents.

Chemist.—The Patent, then, was for both the Potash and the Soda salts. It has been asserted that when the invention was put in operation, and Condy's Fluid brought out, Permanganate of Soda alone was used.

Partner.—At that time, the Permanganates not being commercial products, it was necessary to begin by preparing the salt to be employed. Soda being much cheaper than Potash, and it being a matter of entire indifference, so far as the chemical efficacy was concerned, which was chosen, the preference was naturally given to Soda.

Chemist.—Potash, it seems to me, however, would produce a better article, because the Potash salt being crystallizable (whereas the Soda salt is not) yields a product of greater purity, permitting of uniformity in the strength of the solution. But cheapness, as you say, must have been the chief consideration, especially at the time when the Permanganates were looked upon somewhat as chemical curiosities.

Partner.—True. It would no doubt have been better to use the Potash salt, but its greater cost was considered an obstacle.

Anyhow, Soda was the base chosen. Crude Manganate of Soda was first made, and to it, in solution, Sulphuric Acid was added in quantity sufficient to convert the Manganate into Permanganate; Hydrated Oxide of Manganese was thrown down, and the supernatant liquor, consisting of solution of Permanganate of Soda and Glauber's Salt, was then bottled and sold as Condy's Fluid.

Chemist.—Quite so; that is what I suspected on having observed that many of the Bollmann bottles were partially filled with crystals of Glauber's Salt. If I am not mistaken, however, some compensating advantages have lately been claimed for the presence of this impurity; it has been said to impart antiseptic properties to the Fluid, but I should think that the effects of a drachm or two of Glauber's Salt in a pailful of dilute Permanganate solution must be quite infinitesimal.

Partner.—At all events, the superiority of the Potash salt was so obvious, that Chemists and Pharmacists, by common accord, seem to have taken it for granted that it had been preferred to the other substances mentioned in the patent; for you will find it stated in most works on Chemistry, Pharmacy, and Materia Medica that Condy's Fluid is a solution of Permanganate of Potash.

Chemist.—Yes; and, for my part, I cannot understand how any maker of Condy's Fluid can expect to enhance the reputation of his article by the avowal that it is prepared from a substance having the disadvantages I have pointed out.

Partner.—But it is asserted that Soda is a rare and expensive material compared with Potash, and no doubt that was once the case; but it was a very long time ago, and would take us back to the age of the "mineral chameleon."

Chemist.—For my part, I am quite satisfied with the present age, and mean to stick to the improved Potash preparation of the Condy's Fluid Company.

THE CONDY'S FLUID CASE.—Condy v. Mitchell. FINAL DEFEAT of MR. H. BOLLMANN CONDY. FAILURE AND EXPOSURE OF THE "TRAP TO CATCH CHEMISTS."

(*Précis of Report in "The Chemist and Druggist," December 15th, 1877.*)

COURT OF APPEAL, LINCOLN'S INN, Nov. 27, 1877.

LORD JUSTICE JAMES (without needing to hear defendant's counsel) said—That such a suit should have been instituted at all was very remarkable; but that, after the learned Vice-Chancellor's judgment, this appeal should have been brought on was particularly strange. Dr. Mitchell had obtained his right by payment of a substantial money consideration, and CONDY'S FLUID AND CONDY'S OZONISED WATER WERE AS MUCH HIS PROPERTY AS THE PLAINTIFF'S. Having that right, Dr. Mitchell was entitled to set up the Condy's Fluid Company.

LORD JUSTICE BAGGALLAY was of the same opinion. The style of the partnership had been "Bollmann Condry & Co.," and the plaintiff set up in his own name of "H. Bollmann Condry." It was not necessary to consider whether he might have been restrained from so doing; but he came into court with a very bad grace. To get evidence he had resorted to what was, in fact, a TRAP TO CATCH CHEMISTS.

LORD JUSTICE THESIGER was also of that opinion; and especially as to the character of the plaintiff's evidence. A good deal of it seemed to him not admissible at all.

LORD JUSTICE JAMES: APPEAL DISMISSED WITH COSTS.

NOTICE.—Chemists ordering should specify **THE CONDY'S FLUID COMPANY'S** articles at **REDUCED TRADE PRICES**, which are listed by the principal Wholesale Houses. They are made in strict accordance with the Patent, are uniformly up to strength, free from sediment, securely corked, and always give satisfaction alike to consumer and to dealer. They are guaranteed by the original labels of the late Firm, with Prize Medals awarded at International Exhibitions, the unwarranted use of which is a misdemeanor, and the right to the use of which is confirmed to the Company by Decree.

THE CONDY'S FLUID COMPANY, 7 FALCON STREET, LONDON, E.C.

N.B.—Beware of mean and fraudulent Imitations of our Firm and Prize Medal Labels.

OZOKERINE

(REGISTERED).

A new preparation, PERFECT as a BASIS for OINTMENTS, of admirable consistency, bland, emollient, antiseptic, and healing.

CANNOT BECOME RANCID.

"Moderate in price, and deserving a careful trial."—BRITISH MEDICAL JOURNAL.

"A valuable and useful substance, and will in all probability be very largely used."—MEDICAL TIMES AND GAZETTE.

"Will take a high position among our other pharmaceutical preparations."—MEDICAL PRESS AND CIRCULAR.

"Likely to prove useful as a dressing for wounds and excoriations."—PRACTITIONER.

OZOKERINE is a clear, pale yellow, very slightly fluorescent body, composed of hydrocarbons akin to Paraffine in their chemical characters. It is produced from Ozokerit, or Earth Wax, by the separation of lighter and denser hydrocarbons, and subsequent purification by processes which remove smell and taste, and yield it in the pleasant form which has already gained for it a preference before other similar bodies.

OZOKERINE has been used with remarkable success as a simple *dressing for wounds*, its mild and healing properties rendering it peculiarly grateful to the patient.

OZOKERINE is unsurpassed as an *unguent basis*; *unchangeable* in itself, except by the action of the *most powerful chemical agents*, it preserves other bodies with which it may be incorporated from all tendencies to decomposition. The *superiority of Ozokerine to lard* in this respect *cannot be over-estimated*.

OZOKERINE, in addition to the above advantages, possesses that of being *moderate in price*, which marks it out as a preparation destined to supersede all other articles hitherto used for similar purposes.

Each Tin is stamped on the lid with the words "FIELD'S OZOKERINE, REGISTERED."

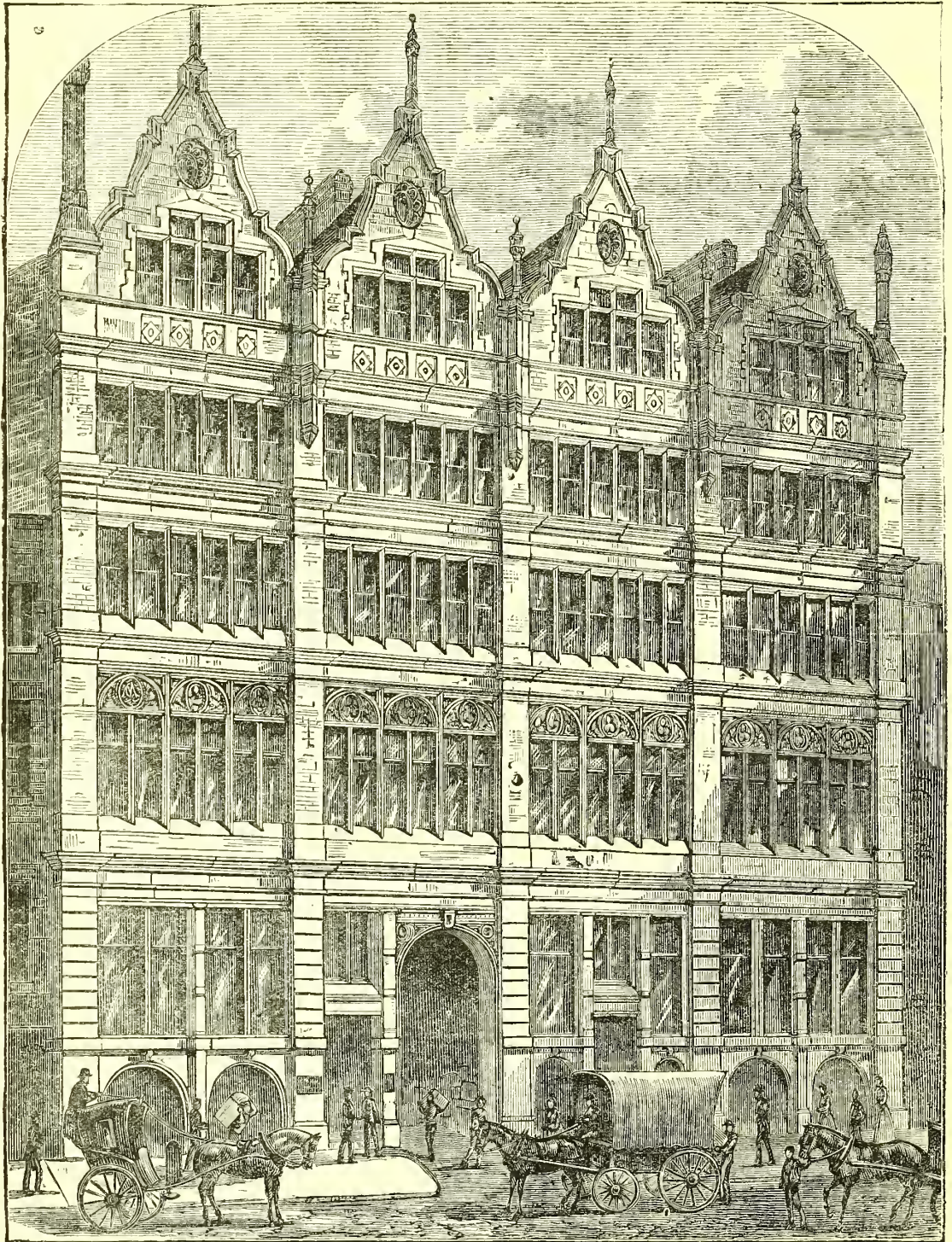
Made only by J. C. & J. FIELD.

SOLE AGENTS:

CORBYN, STACEY & COMPANY,

WHOLESALE AND EXPORT DRUGGISTS,

300 HIGH HOLBORN, LONDON.



NEW FRONTAGE TO THE PREMISES OF
S. MAW, SON & THOMPSON,
ALDERSGATE STREET, LONDON.

S. MAW, SON & THOMPSON'S
NEW
SHOW ROOMS
ARE NOW OPEN,
CONTAINING COMPLETE SAMPLES OF ALL KINDS OF
DRUGGISTS' SUNDRIES,
SURGEONS' INSTRUMENTS, &c.

SURGEONS' INSTRUMENTS, ETC. - - - GROUND FLOOR.
DRUGGISTS' SUNDRIES, ETC. - - - FIRST FLOOR.
SPONGE ROOM - - - - - THIRD FLOOR.

Open from 9 a.m. to 6 p.m. A Visit is Solicited.

7 TO 12 ALDERSGATE STREET, LONDON.

CLARKE'S WORLD-FAMED "BLOOD MIXTURE."

COPY OF OFFICIAL CERTIFICATE,

ACCORDING TO THE LAST TRADES MARKS' ACT.

TRADE MARKS' REGISTRY OFFICE: LONDON, 4th May, 1878.

FRANCIS JONATHAN CLARKE, Esq.

SIR,—I have to inform you that, pursuant to Rule 21 under the Trades Marks' Registration Act, 1875, the Trade Marks applied for by you in application No. {3,270 and 3,272-3-4-5}, and duly advertised in No. 20 of the Trade Marks' Journal, have been registered in your name in class 3.—I am, sir, your obedient servant, **H. HEADER LACK, Registrar.**

Mem.—3,275 is the number of Mr. F. J. Clarke's Trade Mark, "BLOOD MIXTURE."

IN CHANCERY.

LORD CHANCELLOR.

VICE CHANCELLOR MALINS.

1873. C. No. 109.

Between **FRANCIS J. CLARKE, Plaintiff,**

AND

GEORGE CLARKE, Defendant.

CAUTION.

WHEREAS, the Vice-Chancellor, Sir Richard Malins, on the 21st day of July, 1873, upon the application of Francis J. Clarke, of High Street, in the City of Lincoln, Chemist, the plaintiff in the above suit, awarded a perpetual Injunction, restraining the defendant, George Clarke, of Manchester, his servants and agents, from using the words "Blood Purifying Mixture," or any other imitation or colourable imitation of the Plaintiff's Trade Mark, "BLOOD MIXTURE," in or upon any bottles offered for sale by or for the defendant, or on any labels, handbills, or advertisements printed, used, or issued by or for the defendant, and from in any other way representing any medicine, compounded by or for him, to be "Blood Mixture," and from doing any act or thing to induce the belief that medicine compounded by or for the defendant, is "Blood Mixture," or a medicine compounded by the plaintiff.

And it was Ordered, that the defendant, at the request of the plaintiff, and in the presence of some person to be appointed by him for that purpose, destroy all wrappers, handbills, bottles, advertisements, and circulars in the defendant's possession, or under his control, containing the plaintiff's said trade mark, or any colourable imitation thereof.

ALL PERSONS ARE THEREFORE CAUTIONED against purchasing, selling, exposing for sale, or otherwise dealing in any medicine purporting to be "Blood Mixture," not compounded by the plaintiff, Francis J. Clarke, in bottles or wrappers, or with other accompaniments bearing facsimiles or fraudulent or colourable imitations of those invented and used by the plaintiff, the said Francis J. Clarke. Retail dealers, as well as manufacturers, are equally liable.

Dated this 28th day of July, 1873.

H. K. HEBB, Plaintiff's Solicitor, LINCOLN.

CAUTION.—PUBLIC APOLOGY.

CLARKE'S WORLD-FAMED BLOOD MIXTURE.

I, CHARLES MONTAGUE CLARKE, do hereby acknowledge that I, under the SPURIOUS title of Doctor of Medicine, have illegally infringed and pirated your Trade Mark, "BLOOD MIXTURE," and copied your advertisements, labels, handbills, and "Caution," with intent to deceive the public.

And I, **GEORGE HERBERT CLARKE**, of 130 SHOREDITCH, LONDON, do hereby acknowledge that I, under the title of Pharmaceutical Chemist, have prepared and sold for the said Charles Montague Clarke a certain compound called Blood Renovator.

Now we, the said Charles Montague Clarke and George Herbert Clarke, do hereby, in consideration of your consenting to offer no evidence against the said George Herbert Clarke on a **TRUE BILL FOUND AGAINST HIM**, under the Merchandise Marks Act, by the Grand Jury of the Middlesex Sessions, on the 6th day of October instant, undertake and agree to discontinue such practices, and to hand over to your Solicitor forthwith all wrappers, handbills, advertisements, circulars, and bottles containing the stuff, in our power or control, relating to the said *spurious compound* called "Blood Renovator," and we humbly apologise for having resorted to such practices,

CHARLES MONTAGUE CLARKE.

GEORGE HERBERT CLARKE.

SIGNED by the said Charles Montague Clarke and George Herbert Clarke, on the 13th of October, 1874, in the presence of **HENRY BULL**, Clerk to Mr. J. SEYMOUR SALAMAN, 12 King Street, Cheapside, Solicitor to the Trade Mark Protection Society. To Mr. F. J. CLARKE, Lincoln, Proprietor of Clarke's World-Famed Blood Mixture.

CAUTION.—Mr. CLARKE will take immediate proceedings against all persons pirating his Trade Mark—"BLOOD MIXTURE" (fully protected under the Trade Marks' Registration Act of 1875), Labels, Wrappers, Bills, or Advertisements, or in any way infringing his rights.

TO THE MEDICAL PROFESSION

MALTINE.

(EXTRACT OF MALTED BARLEY, WHEAT, AND OATS.)

This Preparation contains from Five to Ten times the beneficial and nutritive elements found in any alcoholic Extract of Malt.

MALTINE is a highly concentrated extract of malted *Barley*, malted *Wheat*, and malted *Oats*, containing, undiminished and unimpaired, all the nutritious principles that can be extracted from these cereals. By the most carefully conducted scientific process we are enabled to offer to the medical profession a perfect article, possessing *five to ten times* the beneficial and nutritive merit of any alcoholic or fermented Extract of Malt.

In support of our claims we invite the attention of the Profession to the following points, viz. :—

FIRST: In the manufacture of **MALTINE** the evaporation necessary to reduce it to its great density is conducted *in vacuo*, at a temperature ranging from 100° to 120° Fahr.; while many manufacturers of Extract of Malt resort to "open pan" or low pressure steam boiling. By neither of the latter processes can the extract be so produced as to preserve unimpaired the Diastase, Phosphates, and Albuminoids on which its remedial value so greatly depends; the products also are either of a dark colour or of low specific gravity, and possess little virtue aside from the saccharine matter which they contain.

SECOND: **MALTINE** being a non-alcoholic or unfermented malt extract, and prepared at a low temperature, it contains far more of the invaluable starch-converting Diastase than any alcoholic malt extract can possibly contain, while its concentrated condition prevents the Diastase from being spoilt by keeping. In **MALTINE** this innocuous but all powerful medicinal agent, Diastase, is thus placed at the disposal of medical practitioners and the public in its best possible condition.

THIRD: **ZIEMSEN** says, "During the last few years Malt Extract has almost entirely taken the place of Cod Liver Oil in the treatment of phthisis and other wasting diseases, at the Basle Hospital, and we have as yet found no reason for returning to the use of the latter remedy." The carbohydrates, or heat-producing materials in **MALTINE** will, alone, we believe, be found to be the perfect equivalent of Cod Liver Oil—to say nothing of the nourishing materials.

FOURTH: **LIEBIG** says, "Wheat and Oats stand first among our list of cereals in combining all the elements in proportions necessary to support animal life. They are especially rich in muscular and fat-producing elements." Hence our reason for using malted Wheat and malted Oats, while we use malted Barley in the manufacture of **MALTINE**, because it is comparatively rich in Diastase.

We believe that any practitioner will readily recognize the superiority of **MALTINE**, and the Manufacturers respectfully request a trial and comparison of merits with any article offered for similar uses.

MALTINE AND ITS COMPOUNDS

Can undoubtedly be used with greater success than any other remedy now known in cases of General and Nervous Debility, Indigestion, Imperfect Nutrition, and Deficient Lactation; Pulmonary Affections, such as Phthisis, Coughs, Colds, Hoarseness, Irritation of the Mucous Membranes, and Difficult Expectoration; Cholera Infantum and Wasting Diseases of Children and Adults; Convalescence from Fevers, and whenever it is necessary to increase the vital forces and build up the system.

We Manufacture the following Preparations, the Formulas and Doses of which are printed on the Labels attached to each Bottle:—

MALTINE: In 16-oz. and 8-oz. Bottles, at 4s. 6d. and 3s. 6d.

MALTINE Ferrated: Do. 6s. 6d. and 3s. 6d.

This combination is specially indicated in Anæmia and Chlorosis, and in all cases of defective nutrition where Iron is deficient in the system.

MALTINE with Alternatives:

In this preparation **MALTINE** is combined with the most valuable Alternatives known, such as Iodides, Bromides, and Chlorides, and will fully meet the requirements of the practitioners in Syphilis, Scrofula, and all depraved conditions of the blood.

Each fluid ounce contains: *Chloride Calcium*, 10 grains; *Chloride Magnesium*, 10 grains; *Bromide Sodium*, 5 grains; *Iodide Potassium*, 1 grain; *Iodide Iron*, $\frac{1}{2}$ grain. Dose.—One teaspoonful to one tablespoonful. In 16-oz. and 8-oz. Bottles, at 6s. 6d. and 3s. 6d.

MALTINE with Beef and Iron:

One of the most valuable combinations in cases of General Debility when there is deficient nutrition and a deficiency of Iron in the system. In 16-oz. and 8-oz. Bottles, 6s. 6d. and 3s. 6d.

MALTINE with Cod Liver Oil:

The most perfect Emulsion, and most agreeable and effective mode of administering this nanseous but valuable Oil yet discovered. In 16-oz. and 8-oz. Bottles, 6s. 6d. and 3s. 6d.

MALTINE with Hypophosphites.

This preparation is specially indicated in Phthisis, Rickets, and Deficient Ossification. In 16-oz. and 8-oz. Bottles, 6s. 6d. and 3s. 6d.

MALTINE with Pepsine and Pancreatine.

One of the most effective combinations in Dyspepsia, Cholera Infantum, and all diseases resulting from imperfect nutrition. It contains three of the all-important digestive agents, Diastase being one of the constituents of the **MALTINE**. We believe there are few cases of Dyspepsia which will not readily yield to the medicinal properties of the above combination, while the system is invigorated by its nutritive qualities. In 16-oz. and 8-oz. Bottles, 6s. 6d. and 3s. 6d.

MALTINE with Phos. Iron, Quinia, and Strychnia.

A powerful nutritive, general and nervous tonic. In 16-oz. and 8-oz. Bottles, 6s. 6d. and 3s. 6d.

MALTINE WINE.

DOSE.—From a dessert-spoonful to a table-spoonful. In 16-oz. and 8-oz. Bottles, 6s. 6d. and 3s. 6d.

MALTINE WINE with Pepsine and Pancreatine.

Each fluid ounce contains: 15 grains *pure Pepsine*, and 15 grains *pure Pancreatine*. DOSE.—From a dessert-spoonful to a table-spoonful. In 16-oz. and 8-oz. Bottles, 6s. 6d. and 3s. 6d.

MALTO-YERBINE.

Each pint contains: 13 oz. *Maltine*; 2 oz. *Carrageen*; 1 oz. *Yerbine*. DOSE.—From a dessert-spoonful to a table-spoonful three times a day, and at bedtime. In 16-oz. and 8-oz. Bottles, 6s. 6d. and 3s. 6d.

MALTINE preparations are all put up in amber bottles holding eight and sixteen fluid ounces each bottle enclosed in a folding paper box.

THE MALTINE MANUFACTURING COMPANY, LIMITED,
GREAT RUSSELL ST. BUILDINGS (Corner of Gt. Russell and Charlotte Streets), **LONDON.**

CHEMISTS' TRANSFERS.

32 LUDGATE HILL, LONDON (14 Doors from St. Paul's Churchyard).

MESSRS. ORRIDGE AND CO., CHEMISTS' TRANSFER AGENTS,

May be consulted at the above address on matters of SALE, PURCHASE, and VALUATION.

Immediate attention given to Foreign Commissions.

The Business conducted by Messrs. ORRIDGE and Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade.

VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment.

PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

N.B.—NO CHARGE TO PURCHASERS.

| | | | | | |
|---------------------------|-------------------------|--------------|------------------------------|-----------------------|------------|
| 1.—BERKS | Returns £1,100 pr. ann. | Price £1,400 | 9.—KENNINGTON | Returns £268 pr. ann. | Price £250 |
| 2.—BRISTOL (Suburb) | " 900 " | " 900 | 10.—LIVERPOOL | " 400 " | " 300 |
| 3.—CAMBERWELL | " 400 " | " 400 | 11.—LIVERPOOL | " 500 " | " 450 |
| 4.—DEVON (SOUTH) | " 500 " | " 300 | 12.—PENGE, S.E. | " £4 pr. week " | " 250 |
| 5.—DEVON (SOUTH) | £400 to 500 " | " 250 | 13.—SUSSEX (SOUTH) | £600 to 700 " | " 700 |
| 6.—DEVON (EAST) | " 420 " | " 350 | 14.—SOMERSET (Seaside) | " £8 to 9 pr. week " | " 350 |
| 7.—HANTS (SOUTH) | " 576 " | " 650 | 15.—SYDENHAM | " 275 pr. ann. " | " 200 |
| 8.—HIGHGATE (Near) | " 8 pr. week " | " 400 | | | |

Particulars of other Businesses, Town and Country, on application.

ORRIDGE & CO., 32 Ludgate Hill, E.C.

MIDLAND COUNTIES TRANSFER AGENCY.

F. J. BRETT, VALUER TO THE TRADE, LEICESTER.

All kinds of Chemists' Stock and Fixtures valued. Partnerships arranged. Particulars of different classes of Businesses forwarded to Buyers.

Through this Agency Businesses are disposed of quickly, and with as little publicity as possible.

F. J. BRETT, having relinquished the Retail, is now enabled to devote the whole of his time to Transfers and Valuations.

Terms on application. May be consulted personally or by letter upon matters in connection with the Trade *entirely free of charge.*

LONDON (near).—The nucleus of a first-class Retail and Dispensing; neglected of late; large shop, well and substantially fitted; at a valuation or lump sum of £400; fixtures alone are worth the money.

NOTTINGHAM (suburb).—Well-fitted shop and good appearance and position; returns as a branch £400; at valuation of stock and fixtures, about £300; good prices.

NEWCASTLE (suburb).—Through death; good Mixed Retail, capable of great improvement; returns £500; for £150.

STAFFORDSHIRE.—Light Retail and Dispensing; returns £100; for £200.

SOUTH COAST.—Old-established Retail and Dispensing; returning £800; in first-rate watering-place; price £700.

LINCOLNSHIRE.—Good country Retail, with some grocery; returns £1,000; Post Office worth £55; at valuation of stock and fixtures, about £500.

BUCKS.—Good-class country Retail in nice town frequented by visitors; returns, yearly increasing, about £800; long lease at low rent; goodwill of lease and business £100; stock and fixtures at valuation.

YORKSHIRE.—In a large village; the business of a Chemist and Druggist; Gilbey's agency and grocery (about one-fourth returns in grocery); splendid plate-glass shop; large and convenient house and premises; on lease at a rental of £50; returns £10 cash weekly; price about £1,200.

HAMPSHIRE.—Old-established Light Retail in principal thoroughfare of large seaport; plate-glass front; returns average £600; goodwill £50; stock and fixtures at valuation, about £600.

LIVERPOOL.—Handsomely-fitted Pharmacy in central position; returns, under management, £100; for about £300.

LANCASHIRE.—Unopposed Retail; returning £150; under energetic management might be greatly increased; low rent; continued illness cause of sale; about £320.

LEICESTERSHIRE.—In rapidly-increasing suburb of 6,000; light Retail and Dispensing; under personal attention the present returns of £500 ought to be doubled; at a valuation of stocks and fixtures, about £250.

F. J. BRETT, LEICESTER.

MR. T. TRIPPIER,

Transfer Agent and Valuer,

79 ISLINGTON, LIVERPOOL.

ESTABLISHED 1850.

FOR TRANSFER.

IN THE SUBURBS OF LIVERPOOL.—A Dispensing, Prescribing, and Light Retail Business; neatly fitted; corner shop; established 10 years; price £200.

LINCOLNSHIRE.—An old-established Business, returning £500 per annum in Prescribing and General Trade; good position; corner shop at low rent.

MANCHESTER.—A *bonâ-fide* Business, established 15 years, returning £500 per annum; pleasant situation; low rent.

A FAMILY and DISPENSING BUSINESS, situate in a very pleasant part of Liverpool; established 30 years; commanding position, corner shop, good house.

LIVERPOOL.—In a populous neighbourhood, a Prescribing and Dispensing Business; old-established.

SOUTH STAFFORDS.—A light Retail, Prescribing, and Dispensing Business; established 10 years; compact and neatly fitted shop; rent low; at a valuation.

All information on application. Parties applying for the first time will please to send reference to ensure a reply.

Lists of Stock for Appraisement receive immediate attention.

No Commission charged to Purchasers.

TO CHEMISTS, DRUGGISTS, AND SURGEONS.

MR. GRIMWADE

(Of the Firm of Grimwade, Ridley & Co., 4 Great St. Helen's, London, and 69 St. Clement's, Ipswich),

Is prepared to undertake Sales, Transfers, Valuations, Arbitrations, &c., in any part of the Kingdom.

BUSINESSES to be DISPOSED OF.

CHEMIST'S and Druggist's desirable ready-money Pure Drug Business to be sold, with immediate possession; price £500; rent very low. John Jenkins & Co., Philharmonic Chambers, Cardiff.

HULL.—A Bargain, a neatly-fitted Pharmacy, in a rapidly-increasing district; fittings first quality, modern, and nearly new; price, valuation of fixtures, &c. Must be sold. Apply, W. Dodds, Hesse Road, Hull.

CHEMISTS.—To be Disposed of, a genuine Dispensing and Light Retail Business, in a market town in Northumberland; income about £200. Address, K. W. E., care of Currie & Hutchinson, Newcastle-on-Tyne.

FOR IMMEDIATE CASH SALE.—A thoroughly genuine Retail and Dispensing Business in a good London suburb; will bear the strictest investigation; satisfactory reasons for disposal; price, about £1,500. Z. X., Newbery & Sons, 37 Newgate Street, E.C.

LIVERPOOL.—An old-established Business, in an excellent situation; for sale in consequence of death of late proprietor. For full particulars, apply to Josiah Hosking, Brunswick Buildings, Brunswick Street, Liverpool.

FOR immediate Disposal, a genuine Mixed Business (established 1815); with Gilbey's agency; situated in a good market town in Wiltshire. For particulars, apply, in first instance, G. McCall, Esq., Stonehouse, Gloucestershire.

A GOOD Mixed Country Business, with Post office attached, also a Branch in connection; returns in 1877, £1,031; has been established upwards of 35 years; will be disposed of at valuation of stock and fixtures. For particulars, apply to H. H. Capes, Chemist, Epworth, Lincolnshire.

HULL.—For Immediate Disposal in one of the most flourishing and thickly-populated suburbs of the above town; a good ready money, retail and prescribing business, lately carried on as a branch; satisfactory reasons for disposal. Apply, J. Jos. Mountain, Chemist, Hull.

A DISPENSING and Prescribing Business; genuine; near King's Cross; undeniable position for Chemist or Surgeon; 7 rooms and shop; rent £60; lease; price £300; stock at valuation; returns £500 profit. Cards of Mr. Bushnell, Corn Merchant, 181 King's Cross Road, King's Cross.

IN YORKSHIRE.—A ready-money profitable Retail, with working stock and 7 years' lease; taking now, in bad times, about £460; will be sold for one-third of a year's takings; bona-fide and satisfactory reasons for selling. Address, "Delta," Ismay & Sons, Wholesale Chemists, Newcastle-on-Tyne.

DRUG BUSINESS for sale, in Birmingham, returning nearly £500 per annum; rent (taxes and water paid) £26 per annum; for £200.—Drug Business in the Midlands; handsomely fitted; doing a fair trade; price £350. Richard Tomlinson, Druggists' Shop Fitter, 15 St. Paul's Square, Birmingham.

CARMARTHEN.—A Mixed Business for Disposal; fine shop in principal thoroughfare; large returns; long lease (rent £40); stock, fixtures, improvements, &c., at a fair valuation (about £500); satisfactory reasons for leaving; this is a splendid opportunity. For particulars apply to W. E. Jones, 4 Dalston Lane, London.

IMMEDIATELY.—A Branch Drug Business, in the principal thoroughfare of a rising town in the North of England; established about 2 years; satisfactory reasons given for its disposal; present returns about £500; price, 3000, part of which may remain on satisfactory terms. Apply to Messrs. John Ismay & Sons, Wholesale Druggists, Newcastle-on-Tyne.

MR. HINE GILBERT begs to offer a well-established Business in a northern suburb of London; returns £850; held on 14 years' lease, unexpired; price about £800.—S.W., returns £300; price £700.—S.E., improving business; for £250.—Also, others in all parts of England. Full particulars at the Transfer Office, 17 Hart Street, Bloomsbury Square, London, W.C.

LIVERPOOL.—A good and genuine concern; established 80 years, held by late deceased occupant 20 years; this is a good Prescribing and Fancy Perfumery and General trade; no heavy or dirty work; in one of the best and most central parts of the town; no booking; house, &c., on lease; will bear investigation. Address, J. T. B., Office of THE CHEMIST AND DRUGGIST, 44A Cannon Street, E.C.

UNOPPOSED; Handsome Plate Glass Front, commanding appearance, good house, long and valuable lease; rent low; shop nicely fitted and well stocked; rapidly increasing neighbourhood; rent can be more than made by letting; returns last year over £460; all at full prices; satisfactory reasons given for disposing of the same; price, 400 guineas. E. B., 4 St. Mark's Terrace, St. Mark's Square, Dalston, E.

TO CHEMISTS and DRUGGISTS.—For immediate Disposal, in Maryport, Cumberland, an old-established Business; present proprietor has had possession for only a few months, and is now compelled through ill-health to retire from the business; the shop is large, has plate-glass front, well fitted and stocked, and situated in the centre of the market; this is an opportunity very rarely met with for an energetic man; rent £28 per annum; capital required about £500. Apply to S. Sewell, Hall Mills, Workington.

PARTNERSHIP.

WANTED, a Partnership in a Wholesale Drug House (or a Branch of the trade); moderate capital could be invested; thorough knowledge of the Wholesale. Address, 144, Office of THE CHEMIST AND DRUGGIST, 44A Cannon Street, E.C.

EMPLOYERS WANTING ASSISTANTS.

A JUNIOR ASSISTANT Wanted. Apply to T. Shirliff, 115 Stoke Newington Road, London, N.

WANTED, in a Wholesale Pharmaceutical House, an active Young Man; one having experience preferred. Apply, 8 Snow Hill, E.C.

APPRENTICE Wanted, in a select Dispensing and Retail business in best suburb of Manchester; healthy and open situation. "Pharmacist," 205 Bury New Road, Higher Broughton, Manchester.

WANTED, a Salesman or Traveller; well acquainted with all the leading Manufacturing Druggists and Chemists, to introduce a New Machine. J. H. Ladd & Co., 116 Queen Victoria Street.

WANTED, a Qualified Assistant, to Manage a good Dispensing business in a market town in Leicestershire. Address, E. A. E., care of Langton, Edden, Hicks & Clark, 230 Upper Thames Street.

WANTED, immediately, a competent Assistant, to take the charge of a Branch establishment. Address, with references, to H., 8 Grange Crescent, Sunderland.

WANTED, immediately, a Junior Assistant, for a Retail establishment in China; must be a Scotchman, and have passed the Minor Examination. Address, W. C., care of Messrs. Schrader & Co., Stationers, St. Mary Axe, E.C.

DRUG TRADE.—An Assistant is required in a Wholesale House, to take part at either Wet or Dry Counter. None need apply unless thoroughly acquainted with all the duties of the situation. State age, where last employed, and salary required. Address, J. W. C., care of Messrs. Schrader & Co., 31 St. Mary Axe, E.C.

IMMEDIATELY, a competent and trustworthy Assistant; aged about 22; must be a quick and accurate Dispenser, and possess unexceptionable references as to character, &c. Full particulars respecting age, height, salary, and enclosing carte, to Messrs. Hasselby & Robinson, 1 Eversfield Place, Warrior Square, St. Leonards-on-Sea.

WHOLESALE DRUG TRADE.—There is a Vacancy in a Wholesale House for a Gentleman in the office; must understand the trade, and have been accustomed to Invoicing and Correspondence; good writing indispensable; state age, where last engaged, and salary required. Address, Z. Z., care of Mr. Charity, Fen Court, Fenchurch Street.

ASSISTANT for China; \$1,200 to \$1,560 a year; communicate, by letter only, stating antecedents from apprenticeship to date, to H. K. D., care of Johnson & Sons, Cross Street, Finsbury. None but really first-rate men need apply; selection will be made on 31st prox., but inquiries will be answered at once.

TO TRAVELLERS calling on Ironmongers and Chemists.—The Advertiser wish to meet with the services of a Traveller to sell their Manufactures on Commission, in conjunction with his usual business. Their goods are well known, no samples to be carried, and, to a competent person, liberal terms would be offered. Satisfactory references required. Address, 367/34, Office of THE IRONMONGER, 44A Cannon Street.

A CHEMIST'S ASSISTANT (from London) to take charge of the Medical Department of a Trading Company in Assam; age, 20 to 24; must be proficient in preparing prescriptions, and have a general knowledge of drugs. Salary, 1st year, Rs. 100 per month (about £10); 2nd year, Rs. 125; and 3rd year, Rs. 150 per month, with unfurnished lodging. Apply, by letter only, to E. J. Rock, Secretary, Planters' Stores and Agency Company (Ltd.), 1 Great Winchester Street, E.C. No reply sent if application not entertained.

ASSISTANTS WANTING SITUATIONS.

MR. BAKER (Chemist's Locum Tenens), 3 Spital Street, Guildford. Engaged in Jersey until February 20.

AS OUTDOOR ASSISTANT; or the Management of a Branch. W. Venning, South Brent, Devon.

OUTDOOR ASSISTANT, or Manager; aged 30; qualified. "Statim," Mr. James Hall, Brizenorton, Bampton, Oxon.

OUTDOOR ASSISTANT; 7 years' experience; good references. Address, W. E. M., 8 Annetwell Street, Carlisle.

TO CHEMISTS.—As Junior; good references. J. Slattery, Main Street, Kilmallock, Limerick.

WANTED, Situation in London, as Junior in Retail and Dispensing; S.E. District preferred; good reference. W. E., Mr. Wynter, Chemist, Seaford.

LABORATORY MANAGER.—A Pharmaceutical Chemist, experienced in the Manufacture of Pharmaceutical Preparations on a large scale, desires a Re-engagement. "Pharmacist," Mr. John Slight, Chemist, Lincoln.

AS JUNIOR; aged 25; 5 years' town and country experience: good references; London preferred. A. B., 19 Meat Market, Bury St. Edmunds.

DISPENSER to Surgeon or Hospital; aged 24; Apothecaries' Hall qualification; disengaged. Apply, X. X., Harris's Library, Stoney Stratford.

AS ASSISTANT, or to Manage a Branch; aged 32; 16 years' experience; accustomed to good Dispensing and Retail. "Registered," 12 Western Road, Shoreham, Sussex.

A REGISTERED CHEMIST desires a Situation, temporary or otherwise, as an outdoor Assistant or Manager, or as Dispenser to a Medical Man. J. J. T., 15 Edinburgh Street, Liverpool.

AS ASSISTANT to a Chemist, or Dispenser to a Surgeon; in London; 6 years' experience; able to Extract Teeth; height 6 feet; disengaged one month after engagement. D. M. J., 2 Duffield Road, Derby.

TEMPORARY, or to Manage a Branch.—The Advertiser, aged 34, thoroughly experienced, can Proscribe and Extract Teeth, &c.; an abstainer. G. R., care of Mr. Wilks, 152 Mile End Road, E.

WHOLESALE or **RETAIL.**—Wanted, Situation by a Young Man; 7 years' experience. Apply, A. P., 164 Southwark Bridge Road, Borough, S.

TO CHEMISTS.—A Young Man desires a Situation as Assistant or Improver to the counter; has had 2 years' experience; reference can be had. Apply, by letter, to H. H., 49 Burgate Street, Canterbury.

AS ASSISTANT; about the middle of March; aged 32; good and varied experience, both town and country; outdoor preferred. W. S. T., 35 Munster Street, Reading.

R. E. BUNN, Temporary, Locum Tenens, or Manager, is open for future Engagement; town or country; terms moderate; excellent references. Present address, 7 Friar's Road, St. Nicholas, Ipswich, Suffolk.

AS ASSISTANT; aged 26; height 5 ft. 10 in.; 10 years' experience; please state particulars. H. Edwards, New Mill, Hudlfield, Yorkshire.

OUT DOOR ASSISTANT in a Dispensing and General Business; aged 26; disengaged after this month; Minor Examination. Address, W. Messrs. Barron, Harveys & Simpson, Giltspur Street, E.C.

AS JUNIOR, in town or country, with time for reading; Hall qualification; aged 22; now disengaged. W. P., 22 Lewisham High Road, New Cross, S.E.

AS ASSISTANT; registered; 18 years' varied experience; good mixed business within 20 miles of London preferred; not afraid of work; salary moderate; good dispenser; steady. Address, X. X., 175 Lavender Road, York Road, Battersea.

WANTED, Situation as Manager to Chemist and Druggist, Branch or otherwise; town or country; 18 years' experience in business; references as to character, &c., will bear the strictest investigation. Address, S. F., 37 Bourn Street, West Derby Road, Liverpool.

TRAVELLER, Manager, or Situation in Wholesale.—The advertiser, registered, aged 45, married, is open to Engagement in any of the above; has been used to travel in the North of England; references first-class. Address, with particulars of salary and duties, "Chemicus," 8 Throuelliffe Grove, Oxford Road, Manchester.

A REGISTERED CHEMIST, married, but without family, desires Employment in any position of trust, either as Manager of a Branch, or otherwise; has had 25 years' experience in established businesses, and can give satisfactory references. H. H., Messrs. Barron, Harveys & Simpson, Giltspur Street, London, E.C.

MISCELLANEOUS.

AGENTS Wanted.—Chemists only.—The Maker of Two Proprietary Articles is prepared to supply them to Chemists only, on very advantageous terms. For particulars address, "Specs," care of Messrs. Hearon, Squire & Francis, 5 Coleman Street, London.

PURE LEICESTERSHIRE LEAF LARD, especially prepared for Pharmaceutical use, in 10-lb. air-tight tins, 6d. per lb.; also in 1, 2 and 3 cwt. casks, 42s. per cwt.; slightly tinged lard for sheep and cattle ointment, 37s. per cwt.; finest lard oil, 3s. 9d. per gallon; fine neatfoot oil, 4s. per gallon; Cooper's "Excelsior" machine oil, 2s. 7d. per gallon; an excellent lubricant for light machinery, 2s. per gallon; dark lubricant, 1s. 10d. per gallon. The Trade only supplied. Apply, J. Cooper, Lard and Oil Merchant, Church Gate, Leicester.

EMS PASTILLES,

Celebrated for Coughs, Hoarseness, all Bronchial Affections, Acidity, Sickness, and Indigestion.

AGENTS WANTED EVERYWHERE. APPLY TO THE SOLE IMPORTER,

W. A. MASSINGHAM,

16 UNION COURT, OLD BROAD STREET, LONDON, E.C.

OL. LAVAND. RECT.

Refined by our Special Process, this Oil is nearly equal to that of Mitcham. Price 21s. per lb., of

SYMES & CO., LIVERPOOL,
AND THE WHOLESALE HOUSES.

MECHANICAL DENTISTRY.

ENTWISLE BROS., 17 SHAW STREET, LIVERPOOL,

Will send full scale of charges for Mechanical Work, Plate and Vulcanite, on application.

ESTABLISHED **TULLY'S** 1872.

POSTAL TEACHING

For the MINOR and PRELIMINARY.

FREE—Minor, ONE GUINEA; Preliminary, 10s. 6d. Send stamped envelope for particulars and Copies of Testimonials to Mr. J. TULLY (Hill's prizeman), Chemist, Tunbridge Wells. "How to PREPARE for the MINOR," 12 stamps. "How to WRITE EQUATIONS," 12 stamps. "TULLY'S ARITHMETIC AND METRIC SYSTEM," 2s. From the Author, or of KIMPTON, 52 High Holborn, W.C.

PRELIMINARY AND MINOR EXAMINATIONS.—STUDENTS prepared by CORRESPONDENCE. "NO PASS, NO PAY." Enclose stamped envelope to "TUTOR," care of Mr. Filtness, Rotherfield. "Minor" Students supplied with all necessary specimens free. Forty-seven out of fifty-one pupils passed the last Preliminary.

COBDEN'S QUININE AND PHOSPHORUS PILLS

(Registered). THE BEST NERVE AND GENERAL TONIC. 2s. 9d. and 4s. 6d.

ADVERTISED IN OVER FIVE HUNDRED NEWSPAPERS IN GREAT BRITAIN.

TRADE TESTIMONIALS.

Mr. F. HERBERT, Chemist, Agent at Airdrie, writing on January 29th, 1878, says:—"Cobden's Pills" have sold very well. I find that they give every satisfaction, and that in every case where they have been sold they have given relief to the complaint for which they were purchased."

ANOTHER AGENT'S OPINION.—Under date of July 18th, 1877, Mr. Martin, Chemist, Horsham, writes:—"I can safely say Cobden's Pills sell as well as the older Patent Medicines that have been advertised for years."

SPECIAL NOTICE.—Chemists advertised as Agents in the local Newspapers of Towns where no Agency has been established conditionally on their ordering 1 doz. of the 2s. 9d. size and 1 doz. of the 4s. 6d. This is usually a great help to general business. LIBERAL TERMS TO LARGE BUYERS.

All Wholesale Houses, or **SUSSEX DRUG COMPANY, 135 Queen's Road, Brighton.**

"GOLDEN STAR" BAY LEAF WATER.

The Only True and Genuine. Unrivalled in Richness and Delicacy.

Put up in an Attractive Form, and commands a Ready Sale.

The above quality has never before been offered in the English market. Its immense sale has heretofore been confined to America and West Indies. It is offered with the positive assurance that it is unequalled, and a successful rival with all other fine Toilet Waters.

SUPPLIED BY ALL WHOLESALE DEALERS.

Distillers' Agency: 114 and 116 Southampton Row, LONDON, England.

"PERFECTION"



MRS. S. A. ALLEN'S World's Hair Restorer

Never fails to restore Grey Hair to its youthful colour, imparting to it new life, growth, and lustrous beauty. Its action is certain and thorough, quickly banishing greyness. It is not a Dye. It ever proves itself the natural strengthener of the Hair. Its Superiority and Excellence are established.

The GENUINE only in PINK WRAPPERS Sold by all Chemists & Perfumers

Principal Depot: 114 & 116 Southampton Row, LONDON, England.

CIGARETTE SMOKERS



SMOKE



"Richmond Gem"

CIGARETTES SMOKING TOBACCOS.

—may we say of both sexes—should ask for "Allen's." "It is no figure of speech to say" that the daintily-made rolls contain less paper than tobacco, and that the latter is pure and unadulterated American. Whether the smoker indulges in "The Richmond Gem," with or without mouth-pieces—the latter for choice—"The Pet" Cigarettes, or "Napoleon's" genuine Perique, his experience will be entirely satisfactory. The Tobacco is of the most exquisite quality. In fine, both as regards flavour and construction, Messrs. J. F. Allen & Co.'s Cigarettes thoroughly deserve recommendation. All Tobaccoists supply them.—*Vide The Illustrated Sporting and Dramatic News*, June 15, 1878.

TO PIPE SMOKERS.

A CORRESPONDENT writes:—"The 'RICHMOND GEM MIXTURE' is delicious and remarkably well compounded; this Mixture should only be smoked indoors, it is far too good to be wasted 'on the desert air'."

"The 'RICHMOND GEM CURLY CUT' is also excellent, and it is difficult to choose between this and the above, but I think the turn is just in favour of the 'Mixture'; this is also almost too delicate a flavour for out-of-door use to enjoy it as one ought."

"The 'IMPERIAL BIRD'S EYE' is a pleasant, clean-smoking, fragrant Tobacco, capital for Yachting, Fishing, Shooting, or in fact any other out-of-door use."

"I observe one thing with all these Tobaccos, they do not cake, or go hard in the pipe, however tightly filled, and they burn to the very last grain; nor do they clog the pipe as other Tobaccos do, requiring frequent scraping; the absence of Nitro, besides saving the burning of the tongue and parching the throat, so usual with other Tobaccos, affords the luxury of a dry pipe to the last, there is no 'wobbling' to be heard a yard off."

TO EXPORTERS OF TOBACCO.

Richmond, Virginia, July 1, 1878.

"We beg to inform you that we have appointed Messrs. HENRY K. TERRY & Co. Sole Agents for Great Britain for the sale of our Tobaccos and Cigarettes. We have also given them the entire charge of our London Export and Shipping Trade, and take leave to refer you to them for quotations. Messrs. H. K. TERRY & Co. have been acting as our Agents since the first introduction of our goods in Great Britain, and our experience of their business transactions hitherto gives us perfect confidence that their appointment will be attended with the most satisfactory results, both to you and us, in the future. Thanking you for your liberal patronage at the past, and respectfully soliciting its continuance, we remain, your obedient servants,"

"J. F. ALLEN & CO."

J. F. ALLEN & CO.'S TOBACCOS and CIGARETTES (the Name and Trade Mark upon every Package) are sold by all first-class Establishments throughout the UNITED KINGDOM, INDIA, and the COLONIES.

Messrs. TREACHER & CO., Limited, Agents for Bombay, Byculia, and Poona; Messrs. WATSON & SUMMERS, Agents for Calcutta; Messrs. OAKES & CO., Agents for Madras; Messrs. DREYFUS & CO., Port Elizabeth; Mr. THEODOR DREYFUS, King William's Town, Wholesale Agents for the Cape Colony.

Sole Consignees: H. K. TERRY & CO., Great Russell Street, London.

EXPORT PRICE LIST FORWARDED TO THE TRADE UPON REQUEST.

Literary and Scientific.

ESTABLISHED 1842.

THE SCHOOL OF PHARMACY

Of the Pharmaceutical Society of Great Britain.

Chemistry and Pharmacy, Prof. REDWOOD. | Botany and Materia Medica, Prof. BENTLEY. | Practical Chemistry, Prof. ATTFIELD.
Demonstrators, Dr. SENIER and Mr. H. G. GREENISH.

THIRTY-SIXTH SESSION, 1877-8, extending from October 1 to July 31.

Application for admission to the School, for Prospectuses, or for further information, may be made to the Professors or their Assistants in the Lecture Room or Laboratories, 17 Bloomsbury Square, London, W.C.

THE CENTRAL SCHOOL OF CHEMISTRY AND PHARMACY,

173 MARYLEBONE ROAD (OPPOSITE LISSON GROVE), N.W.

DIRECTORS - - - MESSRS. LUFF & WOODLAND.

Teacher of Chemistry and Physics, Mr. A. P. LUFF, F.C.S., F.L.S., Pereira Medallist, &c.

Teacher of Pharmacy, Botany, Materia Medica, &c., Mr. J. WOODLAND, F.C.S., F.L.S., M.P.S., &c.

Sixth Edition,
Illustrated.

ATTFIELD'S CHEMISTRY,

8vo.

Price 15s.

GENERAL, MEDICAL, AND PHARMACEUTICAL.

"We heartily recommend this work to the pharmacist and physician."—*American Journal of Pharmacy*."For all the numerous class of students who are preparing for the medical or for the pharmaceutical profession we know of no work in the language which can be compared with the one before us."—*Chemical News*, November, 1875.

JOHN VAN VOORST, 1 PATERNOSTER ROW.

WORKS ON THE HEART AND LUNGS, ETC.,

By Dr. DOBELL,

Consulting Physician (late Senior Physician) to the Royal Hospital for Diseases of the Chest, &c.

Just Published, with Chromolithograph Plate.

ON LOSS OF WEIGHT, BLOOD-SPITTING, and LUNG DISEASE. "A person who suffers from loss of weight, blood-spitting, and lung disease is generally thought to be 'in a consumption,' but as either of these conditions may exist alone, may be due to a variety of causes, may be independent of the others, and may require special treatment, it is very important that each should be made the subject of a separate and careful consideration."—*Extract from Preface.* London: J. & A. Churchill, New Burlington Street.

Re-issued, 1876.

8vo., cloth, price 6s. 6d., illustrated by the Heliotype Process.

AFFECTIONS OF the HEART and in its NEIGHBOURHOOD. Cases, Aphorisms and Commentaries. London: Lewis.

New and Enlarged Edition (Sixth), small 8vo., cloth, 6s.

ON DIET and REGIMEN in SICKNESS and HEALTH: and on the Interdependence and Prevention of Diseases and the Diminution of their Fatality. London: Lewis, Gower Street.

New Edition (Third), carefully Revised and Annotated, especially with regard to Change of Climate and other Remedies, New Introduction on the Perivascular System, &c.

ON WINTER COUGH, CATARRH, BRONCHITIS, EMPHYSEMA, ASTHMA. Large 8vo., cloth, Coloured Plates, 10s. 6d. London: J. & A. Churchill.

Large 8vo., cloth, 10s. 6d. to Non-Subscribers, 7s. 6d. to Subscribers.

DR. DOBELL'S ANNUAL REPORTS ON DISEASES OF THE CHEST. Vol. I., for 1875. Vol. II., for 1876. Vol. III., for 1877. London: Smith, Elder & Co.

Royal 32mo., roan, gilt edges, 5s.

A POCKET-BOOK for CHEMISTS,

Chemical Manufacturers, Metallurgists, Dyers, Distillers, Brewers, Sugar Refiners, Photographers, Students, &c. By THOS. BAYLEY, Assoc. R. C. Se. Ireland, Demonstrator of Practical Chemistry, Analysis, and Assaying in the Mining School, Bristol.

London: E. & F. N. Spon, 46 Charing Cross. New York:

446 Broome Street.

GODDARD'S CHEMIST'S PRICE BOOK.

Eighth Edition. 320 8vo. pages, 5s. Now ready.

Enlarged and Revised according to the present British Pharmacopœia.

May be obtained post free from J. GODDARD, Station Street, Leicester, on receipt of 5s.; or of the principal Wholesale Patent Medicine Houses and Druggists' Sundrymen in the United Kingdom.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL,

Albert Embankment, London, S.E.

The Winter Session commences on October 1st, and the Summer on May 1st. Students can enter at either Session. Two Entrance Science Scholarships, of £60 and £40, for first year's Students, are awarded in October. In addition to ordinary Prizes, amounting to £200, the following additional Scholarships, Medals, &c., are given, viz., the "William Tite" Scholarship, £30; College Scholarship, 40 guineas a year for two years; "Mansgrove" Scholarship, of same value; "Solly" Medal and Prize; "Cheselden" Medal; "Mead" Medal; Treasurer's Gold Medal; "Grainger" Prize, &c.

Special Classes for first M.B., and Preliminary Scientific of University of London, and private classes for other examinations. There are numerous Hospital Appointments open to Students without charge.

For Prospectus and particulars apply to

DR. GILLESPIE, Secretary.

LONDON HOMŒOPATHIC HOSPITAL, Great Ormond Street, Bloomsbury.—Mainly dependent on Voluntary Contributions. 65 beds for in-patients. Accident and surgical cases admitted. Trained nurses sent to nurse invalids at their residences.

* * Funds urgently needed.

G. A. CROSS, Secretary.

WORKS ON THE NERVOUS SYSTEM.

By JULIUS ALTHAUS, M.D., M.R.C.P.,

Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park.

DISEASES of the NERVOUS SYSTEM: Their Prevalence and Pathology, with numerous illustrations. Price 12s.

"Dr. Althaus is a consummate master of neural physiology and pathology. His work is of first-rate excellence."—*Medical Times and Gazette*.

London: SMITH, ELDER & CO., 15 Waterloo Place.

On EPILEPSY, HYSTERIA, and ATAXY. Price 4s.

J. & A. CHURCHILL, New Burlington Street.

A TREATISE on MEDICAL ELECTRICITY, and its use in the treatment of Paralysis, Neuralgia, and other diseases. Third Edition, profusely illustrated. Price 18s.

PRACTICAL NOTES on the USE of GALVANISM and FARADISM in the Diagnosis and Treatment of Disease. Second Edition. Price 2s. 6d.

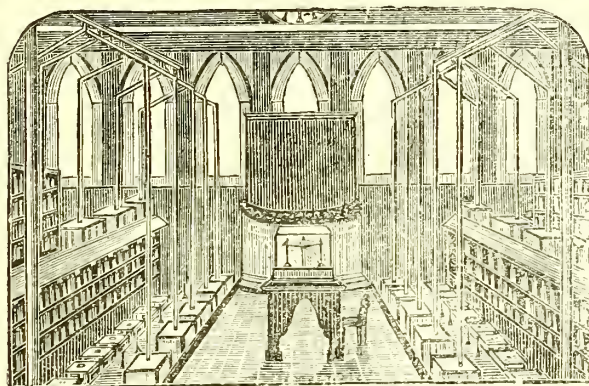
On INFANTILE PARALYSIS and other Diseases of the SPINAL CORD. An Essay to which the Silver Medal of the Medical Society of London was awarded, on March 8, 1878. Price 2s.

LONGMANS & CO., Paternoster Row.

“SYSTEMA OMNIA VINCIT.”

SOUTH LONDON SCHOOL OF PHARMACY.

SCHOOL BUILDINGS
AND
LABORATORIES
AT
325 KENNINGTON ROAD,
S.E.



SECRETARY'S OFFICE
AND
ANALYTICAL DEPARTMENT
AT THE CENTRAL
PUBLIC LABORATORY,
KENNINGTON CROSS, S.E.

Accommodation
for
100 Students.

Chemical and Micro-
scopical Analyses for
the Trade.

TENTH SESSION--1878-79.

The Laboratory of this Institution (represented above) is justly acknowledged to be the most elegantly fitted in Great Britain. The perfect nature of the instruction given is too well known to require comment, and is proved by upwards of 1,200 living witnesses to its success now on the roll of registered Chemists, as well as by the positions occupied by its non-pharmaceutical students both as Medical Officers of Health and Analysts. The Directors continue to spare no expense in giving the greatest facilities, and in providing the most competent Lecturers, so as to ensure to students both present success and permanent benefit in after life.

The strictly Pharmaceutical portion of the instruction includes daily lectures in CHEMISTRY, BOTANY, PHYSICS, MATERIA MEDICA, PHARMACY and DISPENSING, and MEDICAL LATIN, extending either to a term of *ten, five, or three months*; the latter course being intended for students already possessing some private knowledge.

TICKETS OF ATTENDANCE are granted and **PRIZE MEDALS** and **CERTIFICATES of MERIT** are awarded in December, April, and July, by the visiting examiners.

THE LABORATORIES are Open for Practical Instruction daily, from 10 till 5, except Saturday, when they close at 2 p.m.

The **SESSION** extends from 16th September to 20th July, but as the School is usually full some previous notice is advisable, so as to ensure a vacancy on arrival.

THE TERMS are similar to those of any recognised School. For Syllabus, &c., apply (with stamp) to

W. BAXTER, Secretary.

TEXT BOOKS.

DR. MUTER'S PHARMACEUTICAL CHEMISTRY. Price 15s.

"After a careful examination of Dr. Muter's manual we have little doubt that it will be found useful, not to the Student merely, but to the practical Pharmacist."—*Pharmaceutical Journal*.

"The book is one of a very useful and original kind. . . . A great many facts of pharmaceutical interest are mentioned which are not to be found in any other single work."—*Chemical News*.

"Apart from its educational character, the book will be useful as a work of reference, and should therefore find a place in the Pharmacist's library, as well as on the bookshelf of the Student."—*Chemist and Druggist*.

"Dr. Muter adopts a plan which must greatly assist the Student's memory. . . . There is an air of concentrated energy which cannot fail to arrest the attention of every Student."—*Medical Press*.

"Dr. Muter's work ought to rank as one of the most valuable books of reference in every scientific chemist's library."—*Morning Advertiser*.

DR. MUTER'S ORGANIC MATERIA MEDICA. Second Edition.

594 pp., 8vo. Price 12s. 6d.

TO BE HAD AT THE SCHOOL OFFICES; AND OF MESSRS. SIMPKIN & MARSHALL AND MESSRS. BAILLIÈRE, TINDALL & COX.

PROF. HUGHES' MICROPHONE.

Prices: 4s. 6d., 7s. 6d., 10s. 6d., 15s., 21s.

The 4s. 6d. Microphone is upon ebonite base.

The 7s. 6d. Microphone is on a polished mahogany stand.

The 15s. Microphone includes a suitable battery and 10 yards of insulated conducting wire.

The 21s. Microphone is on a large polished mahogany stand, and includes a 3-cell battery and 20 yards of guttapercha-covered conducting wire.

These Microphones, when placed in circuit with a Bell's Telephone and suitable battery, will transmit and render audible through the Telephone the most minute sound—such as the tramp of a fly when it walks. Articulate speech is also transmitted with great facility, so that by their use the Telephone is rendered quite applicable for practical business purposes.

Trade Terms on receipt of business card. Price Lists, 3d. and 1s. each.

M. JACKSON & CO.

(J. ORME & H. M. CAPNER),

MANUFACTURERS AND IMPORTERS OF SCIENTIFIC APPARATUS,
65 BARBICAN, LONDON, E.C.

BUY YOUR CLINICAL THERMOMETERS

Of the actual Makers, and thereby get them Better and Cheaper than those usually supplied.

Plain, 6 in. or 4 in., in Boxwood Case, per dozen, 54s.

Contracted do., in square centre ebony case, with indelible scale, per dozen, 60s.

Kew Certificates, 1s. 3d. extra.



In Metal Cases, 3s. per dozen extra.

Clinical Thermometers, in Propelling Pencil Cases, for carrying in waistcoat pocket, from 10s. each.

CLINICAL THERMOMETERS TO ANY PATTERN, OF ALL KINDS,
MADE TO ORDER.

Extract from Lancet, Nov. 2, 1878:—

DARTON'S NEW IMPROVED CLINICAL THERMOMETER.—We can recommend this thermometer as the most successful attempt that we know of to produce a self-registering thermometer that does not get out of order. Instead of the ordinary constriction in the tube, just above the bulb, the glass is pushed in and forms a knife edge, cutting off the mercurial column as it rises, and thus making the column itself form its own index. This index, being so much longer than the ordinary one, is more easily seen. After reading it off, the column can easily be shaken down, as in an ordinary thermometer.

DARTON'S NEW IMPROVED AUTOMATIC ELECTRIC LAMP,

For use in Lighting large Buildings, Lecture Halls, &c., at Public
Entertainments, price £9 9s.

OPAL GLOBE, on Stand, for ditto, £1 1s.

LARGE PARABOLIC REFLECTOR, with Universal Motion for ditto, £2 2s.

This Lamp will work well with from 20 to 60 quart Bunsen Cells; cost of cells, 5s. 6d. per cell. This Lamp gives a light equal to any at present in use.

SMALLER FORM, fitted with PARABOLIC REFLECTOR, for use at Lectures, &c., price £2 10s.

ELECTRIC LIGHT APPARATUS SENT OUT ON HIRE for the Evening, prices on application.

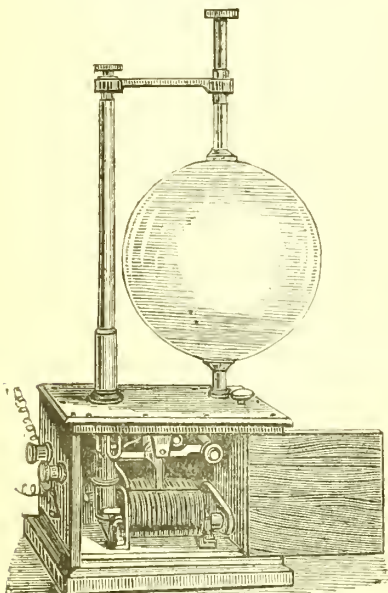
DARTON'S IMPROVED ELECTRIC BELL, PUSH, BATTERY, AND WIRE, complete for 25s.

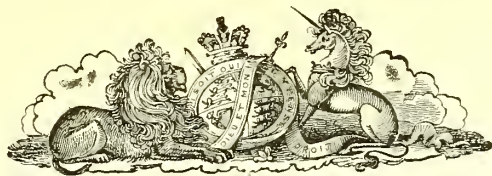
Price List of Electric Bells, with Trade Discount, on application.

MICROPHONES, 1s. 6d., 4s. 6d., and 7s. 6d. each; ditto, with Battery, 12s. 6d.; ditto, with 3 Batteries in tray, 21s.

The Trade Supplied with all kinds of Scientific and Chemical Apparatus at
Lowest Prices.

F. DARTON & CO., 45 ST. JOHN ST., WEST SMITHFIELD. ESTABLISHED 1834.
AGENTS TO THE SCIENCE AND ART DEPARTMENT.





60 LAMBETH ROAD.

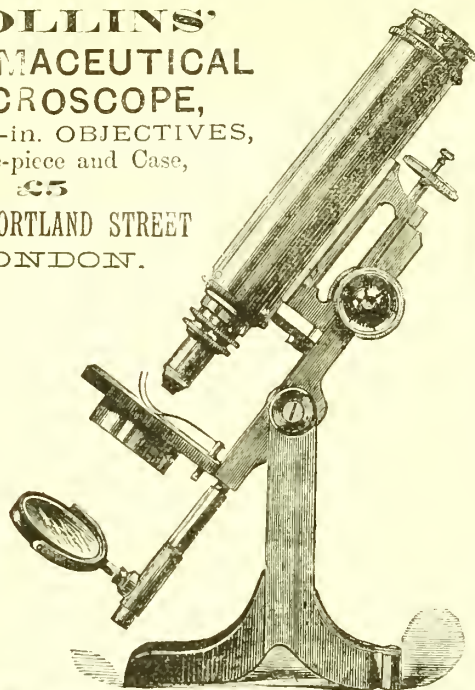
COLLINS' PHARMACEUTICAL MICROSCOPE,

1-in. & $\frac{1}{4}$ -in. OBJECTIVES,
Eye-piece and Case,

£5

157 GT. PORTLAND STREET
LONDON.

36-page Illustrated Catalogue
on application.



ADAM HOLDEN,
MEDICAL BOOKSELLER,

48 CHURCH STREET,

LIVERPOOL,

AGENT FOR THE

PUBLICATIONS OF MESSRS. CHURCHILL

OF LONDON,

AND OTHER MEDICAL PUBLISHERS.

NITROUS OXIDE GAS.

GEO. BARTH & CO.,

Manufacturers of Liquid Nitrous Oxide Gas and Anæsthetic Apparatus, &c.

AN ILLUSTRATED PRICE LIST SENT FREE ON APPLICATION.

26 DUKE STREET, BLOOMSBURY, LONDON, W.C.

BOWLES & CROSS,
MEDICAL & GENERAL PRINTERS,

Engravers, Lithographers,
ETC., ETC.

FOR DISPENSING, RETAIL, and PROPRIETARY LABELS,

FOR MEMORANDUMS, COUNTER BILLS & PRESCRIPTION ENVELOPES,

FOR BILL-HEADS, WRAPPERS of all kinds, & POWDER ENVELOPES,

Send to 3, LAMBETH HILL,
QUEEN VICTORIA STREET, E.C.

THE
MONTHLY HOMŒOPATHIC REVIEW.

EDITED BY
DRS. POPE and DYCE BROWN.

Monthly, price 1s.; or post free to Subscribers for 12s. per annum.

The objects sought to be attained by this Periodical are—
The diffusion of a knowledge of Homœopathy; the development of the Homœopathic Practice of Medicine, of the Homœopathic Materia Medica, and of Homœopathic Pharmacy; the defence of all duly-qualified Homœopathic Practitioners against any restrictions of their rights as Members of the Medical Profession; the circulation of early and accurate information regarding the progress of Homœopathy at Home, in our Colonies, and in Foreign Countries.

Advertisements and Business Communications to be addressed to

E. GOULD & SON,
59 MOORGATE STREET, LONDON, E.C.

NOW READY. H. SILVERLOCK'S SPECIALITIES FOR 1879.

SACHET ALMANACK AND LIST OF ARTICLES.

Arranged for the insertion of a small Packet of Perfume Powder, or otherwise, as required. Elaborately Printed in Colours.

PRESENTATION ALMANACK,

With List of Articles and Directions for taking Medicines, and additional pages for insertion of Specialities. Printed in Colours.

CARD ALMANACK, PRINTED IN COLOURS.

SUITABLE FOR BUSINESS CARDS, CARD LISTS, AND VARIOUS OTHER PURPOSES.

Samples and Prices will be forwarded Free upon application.

H. SILVERLOCK, Medical Printer and Publisher, 92, Blackfriars Road. S.E.



TROMMER'S EXTRACT OF MALT

In the following Combinations, viz.:—

TROMMER'S EXTRACT OF MALT with Hops.

TROMMER'S EXTRACT OF MALT with Cod-Liver Oil.

TROMMER'S EXTRACT OF MALT with Hypophosphites.

TROMMER'S EXTRACT OF MALT with Pyrophosphate of Iron.

PREPARED BY—

TROMMER EXTRACT OF MALT COMPANY, FREMONT, OHIO, U.S.

From "THE LANCET," January 25, 1879.

"We find that this extract converts starch into glucose and dextrine rapidly and in large quantity. In flavour it is excellent, and we have therefore no hesitation in praising it highly."

SOLE WHOLESALE AGENTS—

**LYNCH & Co., 171a & 171b Aldersgate St.,
LONDON, E.C.**

ON REQUEST—FULL DESCRIPTIVE PAMPHLET FORWARDED POST FREE ON RECEIPT OF APPLICATION.

The Old Style

**HUNT'S
PAPER
BOTTLE
CAPS.**

THE NEW

**PLEATED BY
PATENT
MACHINERY.**
SOLD BY ALL
DRUGGISTS & GROCERIES
Manufacturers,
LONDON

3, 4, and 5 Little Windmill Street, Golden Square.

**G. SALTER & CO.,
WHOLESALE PERFUMERS,**

Red Lion Square, London,

X The best value given in Pomades, Lime Juice and Glycerine, Indian Cream, French Extracts, &c., &c.

Specialitie Triple Extracts, Gilt Sprinklers, or Glass Stoppered Bottle, 1 oz., 12s.; 1½ oz., 17s.

AGENTS FOR

DR. STARTIN'S "MEDELA,"
OR ANTI-SCURF POMADE, 12s. dozen.

DR. LINCOLN'S HAIR RENEWER,
A NEW PREPARATION FOR RESTORING THE HAIR,
WELL GOT-UP,

In Two Bottles in One Case, 24s. dozen.

TINGO COMA,
THE BEST DYE IN THE MARKET,
20s. dozen.

A Sample Case of well-selected Perfumery, Pomades, &c., sent to any address on receipt of P. Order for 25s.

SOLE PROPRIETORS OF



DIRECT OR THROUGH ALL WHOLESALE HOUSES.

RECTIFIED SPIRITS OF WINE

One Quality only—Finest BRITISH SPIRIT.

Not less than 2 Gallons, 56° o.p., 20/6; 60° o.p., 21/0 per Gallon.

" " 6 " 56° o.p., 19/9; 60° o.p., 20/3 " "

FOR CASH ON DELIVERY ONLY. COUNTRY ORDERS MUST CONTAIN A REMITTANCE.

HENRY BRETT & CO.,

OLD FURNIVAL'S DISTILLERY, 26 & 27 HIGH HOLBORN, LONDON, W.C.

SPIRITUS RECTIFICATUS, P.B.

CHEMICALLY PURE SPIRITS OF WINE.

A highly-rectified English Grain Spirit, free from Fusel Oil.

60 over proof, 20s. 10d. per gallon; 56 over proof, 20s. 4d. per gallon; less 6d. per gallon for five gallons. Lower quotations for quantities. Cash on delivery or with order. Packages charged, and money repaid when empties returned, 2s. 6d. for two gallons; 5s. for five gallons. Country Orders must contain remittance or reference to London House.

JAMES BURROUGH, CALE STREET DISTILLERY, LONDON, S.W.

ALSO DUTY FREE FOR EXPORTATION.

PURE SPIRITS OF WINE

FOR

TINCTURES, ESSENCES, PERFUMES, &c.,

OXFORD ROAD DISTILLERY, MANCHESTER.

MESSRS. SMITH & GIBB

Beg to call the attention of CHEMISTS and DRUGGISTS to the under-mentioned Prices of Pure Spirits of Wine:—

| Strength per cent. | Specific Gravity. | Price per gallon. |
|--------------------|-------------------|-------------------|
| 63 over proof .. | 0.8238 | 21.0 |
| 60 " .. | 0.8298 | 20.8 |
| 55 " .. | 0.8366 | 20.2 |
| 50 " .. | 0.8482 | 19.6 |

Special quotations for large quantities.

Terms—Cash on Delivery. Jars to be returned or paid for.

Orders from the country must be accompanied with a remittance, including the price of the Jars, which are charged as follows:—2 galls. 3/-; 3 galls. 3/6; 4 galls. 4/-; 6 galls. 6/-. When the empties are returned the money will be repaid. Can be had free for exportation.

SMITH'S TASTELESS

DANDELION ANTIBILIOUS PILLS,

Price, 1s. 1½d. & 2s. 9d. per Box.

A NON-MERCURIAL LIVER MEDICINE, specially useful to the habitually constipated, and safe for all ages.

Worthy of trade notice. Reliable, and rapidly increasing in public acceptance.

PREPARED ONLY BY

MR. SMITH, M.P.S.,
WALWORTH, LONDON.

TO BE HAD OF THE USUAL HOUSES.



JOSEPH IZOD,

IMPORTER & WHOLESALE DEALER IN MEERSCHAUM & BRIAR PIPES,

And every Requisite for Tobacconists,

FARRINGDON ROAD, LONDON, E.C



EWENS' CLARIFIED LARD, MARROW, SUETS, AND OILS.

JAMES EWEN & Sons are induced to give further publicity to these articles, the continued demand by all who have used them being satisfactory proof "that where purity of basis" in ointments, &c., is required, they are most desirable.

By their method of purifying, the fats are not chemically altered, but simply divested of all particles tending to decomposition, they are consequently available for the most delicate preparations.

Adeps. Benz. B. P. and Pharm. Lard (*vide* P. J. Vol. I., No. 8). Direct, "for Cash only," from

JAMES EWEN & SONS' CLARIFIED FAT WORKS,
5 HATFIELD STREET, STAMFORD STREET, S.E.;

Or through any of the Wholesale Houses, with their usual credit, at a small advance.

CAUTION.—See that each package bears their label with name and weight.

HILL'S MAGIC VERMIN KILLER

Is certain Death to Rats, Mice, Ants, Beetles, Cockroaches, and all kinds of Vermin.

THEY TUMBLE OVER



In packets, 3d., 6d., 1s., 2s., and 3s. each. Wholesale Agents: Barclay & Sons, Sangers & Sons, London; or from the Maker,

AND DIE ON THE SPOT.
EDWARD HILL, WELLINGTON, SOMERSET.

Agents wanted in all towns, and by sending business card can have bills with name and address, and their name advertised as Agents in the local papers. A LIBERAL DISCOUNT TO SHIPPERS.



A detailed illustration showing a hand holding a small tool, possibly a brush or applicator, applying a substance from a cylindrical can onto a circular, flat object. The can has a label with some illegible text. The circular object is placed on a textured surface, possibly a piece of paper or fabric. The entire scene is enclosed in a decorative, arched frame.

10 " " " £50 "



I AM DETERMINED TO PREVENT IN ALL CASES EVERY COLOURABLE IMITATION, TO PROTECT MY RIGHTS & PROPERTY.

WRIT OF INJUNCTION

Their Lordships this morning, after consulting Mr. Baron Clesby on the matter, refused the rule, that learned judge having expressed his satisfaction with the verdict.—**RULE REFUSED.** *Vide* daily papers.

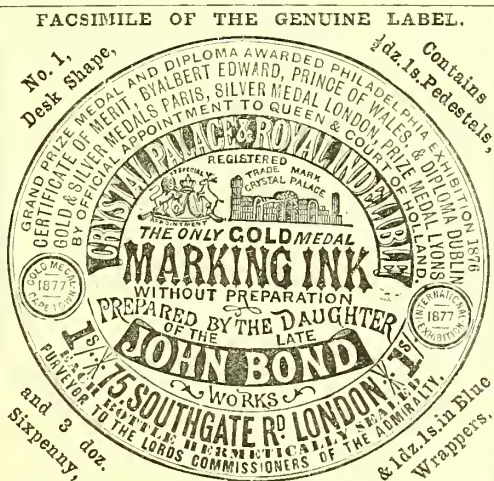
J. HICKISSON, Proprietor of the Daughter of the late John Bond's
Crystal Palace Marking Ink, 75 Southgate Road, London,

BOND'S MARKING INK.
CAUTION to Wholesale
and Retail Vendors.—TAKE
NOTICE that on Nov. 26th,
1877, IN AN ACTION
"HICKISSON & ANO-
THER against MURPHY"
JUDGMENT was given
for PLAINTIFFS, WITH
DAMAGES AND COSTS,
AND A PERPETUAL IN-
JUNCTION GRANTED
RESTRAINING the said
MRS. MURPHY and her
AGENTS FROM USING
the word "BOND" upon
any labels or pedestals
manufactured by or for her,
OR FROM IN ANY WAY
REPRESENTING THE
INK MANUFACTURED
BY HER TO BE BOND'S
MARKING INK.

GRANTED NOV. 28, 1877.

Where are the Thousand and One who have expended and that have expended in trying to oppose this old-established preparation? Chemists, return all others forced upon you and do not offend a Customer by sending a would-be substitute.

**Have you seen the New
Black and Gold Glass Cases
with Hinged Black and Gold
Framed Linen Specimen of the
Crystal Palace with elaborate
GOLD Mounts?**



DEAR HICKISSON, —
Send on receipt the £200
order, as we are much increas-
ing our trade by pushing your
Ink in place of useless
Novelties, as some other
Wholesale Houses are send-
ing other Makers', and there-
by the Retail are closing
their accounts. The 50 No. 1
Glass Cases are sold. Repeat
order immediate.—Yours,
BROWN & CO.

29/4/78.

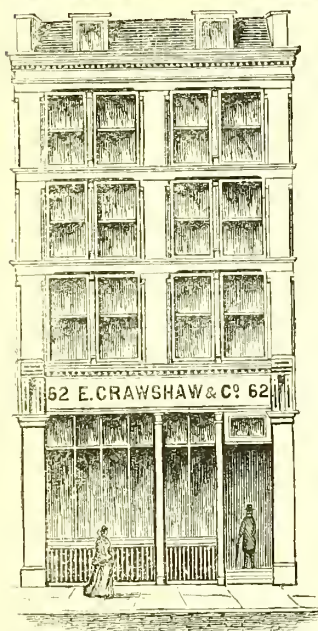
No Heating Required
if allowed to remain
three hours previous to
Washing.

Blue Wrappers. Black and White Oval Label.

- | | |
|--|---------------|
| No. 2 CASE, containing 3 doz. 1s., Crystal Palace and Royal Indelible, Blue Wrapper, Black and White Oval Label, old style. | 16s. each. |
| No. 3 CASE, containing 1 doz. 1s., Crystal Palace and Royal Indelible, Blue Wrapper, old style, and 2 doz. 6d., do. do. | 11s. each. |
| No. 4 CASE, containing 3 doz. 6d., Crystal Palace and Royal Indelible, Blue Wrappers, Black and White Oval Label, old style. | 8s. 6d. each. |



NOTICE OF REMOVAL.



E. CRAWSHAW & CO.,
ANILINE DYE MERCHANTS,

Beg to inform their friends that, owing to the considerable increase in their business, it has been found imperative to have very much larger Premises, and that they have now removed to their

NEW FIVE-STOREY WAREHOUSE

IN

FANN STREET,

Where they hope to receive the continued patronage of the Trade for their unrivalled

CRYSTAL DYES.

All communications to be addressed to

E. CRAWSHAW & CO.,

ANILINE DYE MERCHANTS,

FANN STREET, ALDERSGATE STREET, LONDON, E.C.

COPYRIGHT—ORIGINAL—AND ONLY GENUINE

**WHITAKER & GROSSMITH'S
PURE WHITE GLYCERINE SOAP.**

Richly perfumed, and guaranteed to contain the necessary quantity of GLYCERINE for effectually imparting to the SKIN the softening and healing properties for which GLYCERINE is so justly famed.

NECESSARY CAUTION.—This unrivalled *Toilet Soap* was originated by us in 1863, and solely by its superior merit and moderate price has now attained the patronage of a wide circle of all classes of society. As many (external) imitations of our saleable article are often falsely offered as the *real Soap*, all vendors should please note that the Box and Wrappers now bear our "Trade Mark," and not be misled by inferior counterfeits, thereby causing disappointment to purchasers, and consequent injury to the sale of the original and genuine Soap.

1s. 6d. Boxes of Three Tablets, 12s. per Dozen Boxes.

Trade Price Lists sent and Orders executed through Wholesale Houses, or direct from the Manufacturers,

WHITAKER & GROSSMITH, Wholesale Perfumers, 120 Fore Street, City, London.

WHITE AND SOUND TEETH.

**JEWSBURY AND BROWN'S
ORIENTAL TOOTH PASTE.**



This old-established and increasingly favourite Dentifrice has been Forty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate.

The original and only genuine is manufactured solely by

JEWSBURY and BROWN,
CHEMISTS, MANCHESTER,

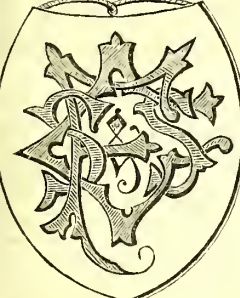
and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered.

Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address card, and directions for enclosure.

G. F. SNOOK & SON,

TRADE MARK.



1d.

Wholesale & Export Manufacturers
of Druggists' Sundries, &c.,
376 CITY ROAD, LONDON, E.C.

TRADE MARK.



$\frac{1}{4}$ lb.

SPECIALITIES—

Arnicated and White Felt Corn and Bunion Plasters. Felt, Hare-skin, and Chamois and Flannel Chest Protectors. Turkish, Toilet, and Bath Gloves. Sponge Gloves. Bath Straps, &c. Breast Exhausters Respirators. Higginson's Enemas. Eye Shades. Calico, Flannel, and Linen Roller Bandages. Violet Powder, Fuller's Earth, &c., &c.

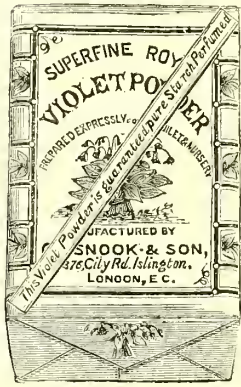
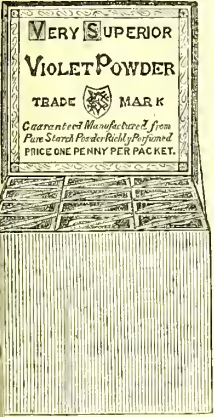
Snook & Son's 1d. Pure Starch Violet Powder, each packet with guarantee, Half-gross in neat Show Box for the Counter, as per Illustration, 5s. per gross. Also in $\frac{1}{4}$ lb. and $\frac{1}{2}$ lb. packets. Pure Starch, richly perfumed, in handsome wrappers, each packet with guarantee. One dozen in a Glass Top Box, $\frac{1}{4}$ lb. 30s., $\frac{1}{2}$ lb. 60s. per gross.

Snook & Son's 1d. Pure Fuller's Earth, each packet with guarantee, in same style as the Violet Powder, price 4s. 3d. per gross.

Snook & Son's 3d. & 6d. Fuller's Earth, in Round Fancy Gold Boxes, one dozen in a box, 3d., 18s. per gross; 6d., 36s. per gross.

G. F. SNOOK & SON beg to say they Manufacture solely for Wholesale and Exportation. Any of the above goods may be had of all Wholesale House-.

G. F. S. & S. will be pleased to forward Sample and Price List free by post on receipt of business card.



PHOENIX
ESTABLISHED A.D. 1815
GENUINE INDELIBLE
THE LEADING & STANDARD ARTICLE
PREPARED ONLY BY THE WIDOW OF THE LATE JOHN MURPHY
CHEMIST AT THE ORIGINAL ESTABLISHMENT
11, NILE STREET. EAST ROAD, HOXTON.N
NO OTHER ADDRESS - BEWARE OF WORTHLESS IMITATIONS.

MARKING INK.
THE ORIGINAL
TRADE MARK.
Estab^d 1815.

RIMMEL'S AROMATIC OZONIZER,
Or NATURAL AIR PURIFIER, a fragrant powder producing by simple slow evaporation in dwellings, or places of public resort, the balmy, refreshing, and healthy emanations of the Pine and Eucalyptus forests. Certified by Dr. Hassall to be the most effective and agreeable disinfectant. Price 1s. By post for 15 stamps.
Evaporating Dishes, 6d.: with Foot, 1s.

RIMMEL'S OZONIZED PERFUMERY.
Dr. DAY, of Geelong, who has devoted much time and attention to sanitary questions, has discovered that alcoholic perfumes form excellent vehicles for diffusing ozone in the atmosphere and destroying noxious emanations and miasma. At his suggestion, E. Rimmel has prepared a series of Toilet Waters (Eau-de-Cologne, Lavender, and Florida), which are oxygenated by a chemical process, and evolve a quantity of Ozone. They are strongly recommended to be used on the handkerchief when attending crowded places, visiting the sick, or travelling by land or sea; also to be sprinkled on beds or carpets, or on a pad hung up in the air. Dr. Day writes to E. Rimmel (November 28, 1877):—"In manufacturing and making known the hygienic use of oxygenated perfumery you will be conferring a great benefit to the public, for it is the best means of disinfecting bedrooms, closets, &c."
PRICES:—Rimmel's Ozonized Eau-de-Cologne } 4 oz. round bottles 2s. 6d.
Rimmel's Ozonized Lavender Water } 8 do. do. 5s. 0d.
Rimmel's Ozonized Florida Water } 16 do. do. 9s. 0d.
Sanitary Pads to be impregnated with the above and hung up in the air, 1s. The usual allowance to the Trade. Wholesales Lists on application to
EUGENE RIMMEL, Perfumer by Appointment to H.R.H. the Princess of Wales,
96 STRAND LONDON.

Dr. C. R. Coffin's AMERICAN DENTIFRICE.

Prepared only by WILLIAM DARLING, Chemist, Manchester. May be had from S. Maw, Son, & Thompson; Barclay & Sons; F. Newbery & Sons; Sanger & Sons; and any Wholesale House in London. Price 2s. per Box, and Family Jars 10s. each.

AWARDS: } **Wood Stains,** { AWARDS:
London and } Vienna }
Exhibitions } Exhibitions }

IN LIQUID AND POWDER.

Packed in 1-lb., ½-lb., ¼-lb., and 2-oz. Boxes, ½-pint 6d. Bottles, and bulk.

Specimen Boards and Circulars supplied when ordered.

MANUFACTURER,

THOMAS S. JACKSON,
199 BOROUGH, LONDON, S.E.,

And of all Patent Medicine Warehousemen. Write for New Price Lists of Oil and Spirit Varnishes, Colours, Paints, &c.

OKELL'S ORIGINAL MONA BOUQUET

Retail, 1/, 1/9, and 3/6; Wholesale, 9/, 15/, and 30/ per doz.

This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for WHOLESALE Agencies to be made to the SOLE CONSIGNEE, **THOMAS WEST, Chemist, Stretford, Manchester.**

TRY IT!
SPANISH

In Bottles,

Unrivalled for RESTOR-
ING HAIR, RENEW-
ING, CLEANING,
THICKENING, and
PREVENTING the Hair



IT NEVER FAILS!
WASH!!

2/6 & 5/- each,

from FALLING OFF or
Turning Grey, instantly
removing all Scurf or
Dandruff, leaving the
skin pure and healthy.

Of Messrs. Low & Haydon, 330 Strand, London; Barclay & Sons, 95 Farringdon Street, London; of any Chemist or Hairdresser; or of A. P. Muddiman, Leighton Buzzard, Beds.

ROUND AND OVAL CHIP AND WILLOW BOXES

Of any size, in the very best quality that can possibly be made. Large stock kept in London. Any buyers of these goods should compare my Samples and Prices before ordering elsewhere.

PAUL METZ, Manufacturers' Agent,

19 & 20 HAMSELL STREET, FALCON SQUARE, LONDON, E.C.

Bankers, London and Westminster Bank, Lothbury, E.C.

TASTELESS PILLS.

(COX'S PATENT.) Dated and Sealed, April 13, 1854.

Surgeons and Chemists supplied with an excellent Aperient Pill (the formula for which will be forwarded), covered with a thin non-metallic film, rendering each pill perfectly tasteless, at 1s. a gross, postage free. They present an elegant, pearl-like appearance, and may be kept in the mouth several minutes without taste, yet readily dissolving, even in cold water, in an hour. Any formula dispensed and covered, and samples, with a list of pills from 500 different forms, which are kept in stock, will be forwarded free on application.

Twenty years' success, as proved by unsolicited Testimonials from Medical Men in almost every town and village in the kingdom, has produced imitations likely to bring a useful invention into disrepute, as a large percentage of the Varnished Pills made to imitate ours pass through the stomach unaltered.

The Registrar of Trade Marks has just granted us (after three months' publicity) the Trade Mark, of which the following is a facsimile, thus officially recognising our claim as the "ORIGINAL MAKERS OF TASTELESS PILLS." All packages sent out from this date will bear this mark—



ARTHUR H. COX & CO.,
TASTELESS PILL MANUFACTURERS,
BRIGHTON.

WOODS' ARECA NUT TOOTH PASTE.

For Removing Tartar and Whitening the Teeth, without injuring the Enamel. Sold in Pots, at 6d. and 1s. each.

WOODS' QUININE, CANTHARIDINE, & ROSEMARY HAIR CREAM

(WITH GREASE), Restores the Hair if weak or falling off.

Price 9d., 1s. 6d. and 3s. 6d. per bottle.

WOODS' QUININE, CANTHARIDINE, & ROSEMARY HAIR WASH,

Similar to the above (without grease). Price 1s. 6d. and 3s. 6d. per bottle.

WOODS' DANDRUFF POMADE.

Never fails. 1s. per pot.

Proprietor: **W. WOODS, M.P.S., Chemist, Plymouth.**
SOLD WHOLESALE BY ALL LONDON HOUSES.

1/6 JUDSON'S 1/6 GOLD PAINT.

| | |
|------------------------|---|
| { 1 Bottle Gold Powder | } 12s. per dozen sets. Six sets on a card, or each set in card box. |
| { 1 " Mixing Liquid | |
| { 1 Mixing Bowl | |
| { 1 Brush | |
| { 1 Bottle Gold Paint | } 10s. 6d. per doz. sets. Six sets on a card, or each set in card box. |
| { 1 " Mixing Liquid | |

For regilding picture and glass frames.
For gilding lamp stands and gas-fittings.
For renewing ormolu ornaments.
For illuminating on paper, silk, or leather.
For artistic cabinet work.
And for a thousand useful and domestic purposes.

C. J. KING,

HUMAN HAIR MERCHANT,

HAIRDRESSERS' SUNDRYMAN,

And Importer of Perfumery & Fancy Goods,
5, 6, & 7 HOLBORN BARS,
LONDON, E.C.



TRADE MARK.

TRADE MARK.

COMBS, BRUSHES, MIRRORS, CUTLERY.
FRENCH PERFUMERY—^{ED.} PINAUD'S and DEMARSON, CHETELAL & CO.

PATENTEE OF THE
IVORIDE DRESSING COMBS.
THESE COMBS BEAR THE NEAREST RESEMBLANCE TO IVORY.

GOLDEN HAIR.

G. DOREZ'S
GOLDEN
For the

TRADE MARK.



TRADE MARK.

AUREOLUS.
FLUID
Hair.

GOLDEN HAIR.

This preparation produces one of the most beautiful and fashionable tints that have been conveyed to the Human Hair. It converts Hair of any colour to tints varying from the richest auburn to the most brilliant golden or sunny hue. It is perfectly harmless and free from smell. In all instances it has given the greatest satisfaction; and is, as a genuine and profitable article, recommended to the Trade. Pamphlets and Handsome Show Cards.

5s. size, price 30s. per dozen.

Sole Agent: C. J. KING, London.

AMERICAN BAY RHUM.

TRIPLE DISTILLED. The only true Universal & Genuine Article.
Distilled from the leaves of the Bay Tree (Myrciactris).
THIS ARTICLE COMMANDS A READY SALE.

This delicate Spirit has acquired a great popularity in America and the West Indies. It is an indispensable Eau de Toilet for the Nursery and Bath, and is an effective remedy for Headache, Nervousness, and Rheumatic Pains. It also alleviates irritation of the skin after shaving or from change of temperature, and removes all impurities from the skin.

ENGLISH LAVENDER WATER.

Much admired for its lasting fragrance.

LIME JUICE

AND

GLYCERINE.

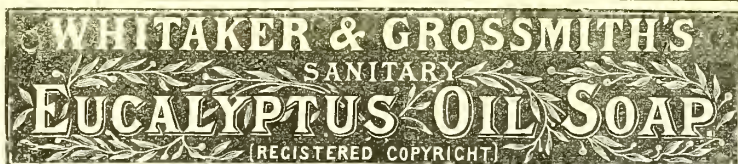
This valuable toilet preparation for the Hair is highly recommended on account of its nutritive and restorative properties.

Attractively put up in Round Shouldered White Glass Bottles.

| | | | |
|---------|---------|---------|--------------|
| 3 ozs. | 4 ozs. | 6 ozs. | 8 ozs. |
| 2s. 9d. | 3s. 6d. | 5s. 3d. | 7s. per doz. |

C. J. KING, 5, 6, & 7 HOLBORN BARS, LONDON, E.C.

Highly recommended by the *Lancet*, *Sanitary Record*, and the *Medical Press* as an elegant Sanitary Toilet Soap for the Skin, with an aromatic disinfectant for the Apartment.



The Sanitary properties of the *Eucalyptus Tree* are now fully retained by enclosing the Soap in tinfoil, and any of the old stock on hand will be exchanged for fresh, free of cost.

The Standard says:—"As an antiseptic, *Eucalyptus Soap* has no rival."
1s. 6d. Boxes of Three Tablets. 12s. per Dozen Boxes.
Special Articles particularly noted for their excellence:

| TOILET SOAPS. | | | Per doz. | BOUQUETS. | | | Per doz. | POMADES, &c. | | | Per doz. |
|-------------------------------|-----|-------------------|----------|-------------------------------|--|---------------|----------|---------------------------------|--------|-------|----------|
| <i>Cent-Fleur (copyright)</i> | 2/6 | Bars of 3 tablets | 20/ | <i>Cent-Fleur (copyright)</i> | | | 1 oz. | <i>Cent-Fleur (copyright)</i> | 8/ | 12/ | & 20/ |
| <i>Jockey Club</i> | " | 1/6 " | 12/ | <i>Inimitable</i> ... | | In Glass | 12/ | <i>Petroleum Pomade</i> ... | | 12/ | & 18/ |
| <i>Musk Windsor</i> | " | 1/6 " | 12/ | <i>Pearl of Perfumes</i> ... | | Stoppered | 2 oz. | <i>Brilliantine</i> ... | ... 8/ | 12/ | & 20/ |
| <i>Sandringham</i> | " | 1/6 " | 12/6 | <i>Stephanotis</i> ... | | Sprinkling or | 18/ | <i>Anglo Eau de Cologne</i> | 8/ | 12/ | |
| <i>Eucalyptus Oil</i> | " | 1/6 " | 12/ | <i>White Rose</i> ... | | cap Bottles. | 3 oz. | <i>Eucalyptus Vinegar</i> ... | 12/ | & 20/ | |
| <i>Semi-Cut Bars</i> | " | 1/ | 8/6 | <i>Ylang-Ylang</i> ... | | | 24/ | <i>White Cherry Tooth Paste</i> | 8/ | & 12/ | |
| | | Bars of 4 kinds | | | | | | | | | |

TRADE PRICE LISTS SENT AND ORDERS EXECUTED THROUGH WHOLESALE HOUSES, OR DIRECT FROM THE MANUFACTURERS,
WHITAKER & GROSSMITH, Wholesale Perfumers, 120 Fore St., City, London.

CAUTION TO THE TRADE.

A. S. LLOYD'S EUXESIS.

In addition to A. S. LLOYD'S original signature on Label, each tube of **GENUINE** Euxesis bears the following distinctive marks:—

Firstly.—My full name, "Aimée Lloyd," on cap of Tube.

Secondly.—The words, "Prepared by his Widow," in raised letters on top of Tube.

Thirdly.—My Address, No. 3 Spur Street, Leicester Square, London, on both English and French Labels.

(Signed), AIMÉE LLOYD,

(Widow of A. S. Lloyd),

Sole Proprietor and Manufacturer of the **GENUINE** Lloyd's Euxesis.

THE UNIVERSAL TOOTHACHE SYRINGE

Retail,
6d. each.



Wholesale,
4s. per dozen.

Is a great improvement upon the "DENTAL SYRINGE," as the fluid is contained in a glass bulb, which enables its contents to be seen, also prevents the liability to evaporation through long keeping or exposure.

THE UNIVERSAL CORN AND WART PENCIL.

1 doz. mounted on a handsome Illustrated Show-Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz.

It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case.

N.B.—Both the above are exempt from Stamp Duty by permission of the Board of Inland Revenue.

"The EMPRESS of INDIA'S BOUQUET"

(Registered under the new Trade Marks Act),

A DELIGHTFUL, REFRESHING, AND FASHIONABLE PERFUME.

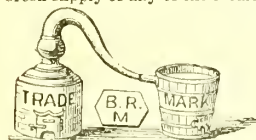
"Chemists may gratify their loyalty to their hearts' content by selling a perfume just introduced by Mr. B. Robinson, of Pendleton, Manchester, called 'The Empress of India's Bouquet.' The perfume is remarkably cheap, and is by no means lacking in richness. The shilling bottles are good sized ones, corked with the patent sprinklers, and decorated with a faithful likeness of the Empress alluded to."—Editor of *The Chemist and Druggist*, November 15th, 1876.

Sold in Bottles, at 1s. each, or Triple Size, 2s. 6d.; Wholesale, 8s. per dozen in 1-dozen cases, and 20s. per dozen in 3-dozen cases.

Prepared only by B. ROBINSON, Operative Chemist and Distiller, PENDLETON, MANCHESTER.

CONCENTRATED WATERS.—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopœia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate.

N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopœia.



| | Per lb. | | Per lb. | | Per lb. | | Per lb. |
|-----------------------|---------|----------------------------|---------|-------------------------|---------|------------------------|---------|
| Aqua Anethi, Concent. | 4/0 | Aqua Cinnam. Ver. Concent. | 6/0 | Aqua Fœniculi, Concent. | 4/0 | Aqua Pimentæ, Concent. | 4/0 |
| " Anisi, " | 4/0 | " Cassia " | 4/0 | " Menth Pip. " | 4/0 | " Rosæ " | 8/6 |
| " Camphore " | 4/0 | " Flor. Aurant. " | 8/6 | " Ang. Con. " | 6/0 | " Rosæ Virgin " | 10/8 |
| " Carui " | 4/0 | " Flor. Sambuci, " | 8/6 | " Viridi, " | 4/0 | | |

The above are put up in Bottles of 3lb. or 1lb. and upwards, each of which has the Inventor's Protection Label over cork.

Wholesale Agents—Hearson & Co., Maw, Son, & Thompson, Lynch & Co., London; Evans, Sons & Co., Raimes, Liverpool; Mather, Woolley, Manchester; Bewley & Draper, Dublin; Glasgow Apothecaries' Co., Hatrick & Co., Glasgow; Reimes & Co., Edinburgh; Foggitt, Thirsk; Goodall & Co., Leeds; Clarke, Bleasdale & Co., York; McKesson & Robbins, New York. Special terms for large quantities may be had from

B. ROBINSON, Operative Chemist, Distiller and Brewer of British Wines, Manchester.

ESTABLISHED 100 YEARS.

TOILET AND FANCY SOAPS

OF EVERY DESCRIPTION.

CHOICE PERFUMES IN BULK.

No. 1 extra 12/ per pint of 20 ozs.

No. 1 9/6 " "

No. 2 8/ " "

Put up also in great variety of size, style, and price.

SOAPS.

Zinc, Sulphur, Petroleum, } 6d. & 1/
 Petrolin, Juniper Tar, & } 4/ & 8/
 other Medicated Soaps .. } doz.
 Glycerine Jelly, 6d. and 1/
 stoppered bots., 4/ & 8/
 per doz.

T. F. BRISTOW & CO.
 MANUFACTURERS,
TOILET SOAPS & PERFUMERY.

PRICE LISTS
ON APPLICATION.BRISTOW'S
SPECIALITIES.

Carbolic Acid Soap.... } In boxes 3 tblts.
 Glycerine and Carbolic Acid } 1/ & 1/6
 Glycerine and Oatmeal Soap .. } 8/ & 12/ per dz.
 Baby Soap for Nursery use { In boxes 4 & 12 tblts.
 (Illustrated Label) } 9/ and 27/ per doz.
 Family Soap, in boxes, 4 & 12 tblts (1/ & 2/9) 8/ & 24/ "
 Cold Cream Soap, in boxes, 3 tblts, in box (1/6 & 2/6) 12/ & 21/ "
 Stockholm Tar Soap } in boxes, 3 tablets in box (1/6) 12/
 Pure Coal Tar Soap } in 4d., 6d. & 8d. tblts, in 3 doz. boxes, 2 6. 3/6, 4/6 doz.
 Transparent Soap, in boxes 3 tablets (1/ and 1/6) 8/ & 12/ "
 Superior Lavender Soap, in boxes, 3 tablets (1/ and 1/6) 8/ & 12/ "
 White Glycerine Soap, in boxes, 3 tablets (1/6) 12/ "
 Dog Soap (Illust Wrapper), Carpet & Cloth Soap, Pumice Stone Soap (6d. & 1/1) .. 3/6 & 7/ doz.

5 BISHOPSGATE AVENUE, LONDON.

Needham's
Polishing Paste,
For Cleaning Brass,
Copper, and Britannia
Metal Goods, &c.

Pickering's Razor
Paste,
For sharpening Razors, &c.

Waterproof
Harness Blacking,
For Black Leather
Harness.

DIPLOMA OF MERIT, VIENNA EXHIBITION, 1873.
 Late
Joseph Pickering & Sons (J. Needham), Albyn Works, Sheffield,
 MANUFACTURERS OF



SOLD BY ALL CHEMISTS, GROCERS, IRONMONGERS, ETC.

Sheffield Knife
Powder,

For Table Knives, Fire
Irons, &c.

Plate Powder,
For Electro-plated
Articles, &c.

Furniture Polish,
For cleaning French
Polished Furniture, &c

Brunswick
Black,
For all kinds of
Iron Work.

THE BEST SHILLING MARKING INK.

‘PETER’S ARGENTUM.’

TRADE NOTICE.

R. W. Watson, Chemist, Angel Street, Sheffield, begs to announce that he has purchased the above property. The Wholesale Houses and Shippers are requested to forward all orders direct to the Sole Proprietor.
 [Usual Terms and Discounts. Counter Bills with Name and Address as Agent on Application.]

LESSEMER'S GOLD PAINTS.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

PRICES, IN PACKETS, 1s. 6d., 2s. 6d., & 4s.

Full Directions for use with each Bottle.

NOTICE.—The Gold Paint is so easy of application, economical in use, and excellent in appearance, that it is extensively employed in the Ornamental Gilding of Decorative Moldings, Carvings, and all Fancy Ornaments made either of Mal, Wood, Porcelain, or Plaster, and the effects that can be produced, even by unskilled hands, make it useful to all engaged in fancy or home embellishment.

Copper and Silver Paint, at the same prices, and yielding equally good results, can be obtained.

Sold by all Wholesale and Retail Artists' Colourmen
 and Druggists' Sundriesmen.

SOLE MANUFACTURER OF THESE SPECIALITIES,

RICHARD J. ALLEN,

Masfield Place, Kentish Town, N.W., London.

FOR CLEANING PLATE.

BRADLEY & BOURDAS'S

ALBATUM or WHITE ROUGE,

For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quarter of a century ago, the sale has amazingly increased both at home and abroad. A trial is only needed to prove its superiority over other plate powders in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 7 Pont Street, Belgrave Square, and 48 Belgrave Road, London, S.W.

**Goddard's
Plate Powder**

For more than a Quarter of a Century this Powder has sustained an unrivalled reputation throughout the United Kingdom and the Colonies as the BEST and SAFEST article for Cleaning Plate.

Sold in Boxes, 1s., 2s. 6d., and 4s. 6d. each. Also

GODDARD'S FURNITURE CREAM. Sold in Bottles, 6d. and 1s. each.

Sold by leading Wholesale Houses and Factors, and by the Inventor,

J. GODDARD, STATION STREET, LEICESTER.

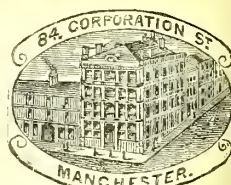
Infants' Feeding Bottle Manufacturer for the Million.



WILLIAM MATHER,

WHOLESALE AND EXPORT

DRUGGISTS' SUNDRIESMAN,



Manufacturer of Court Plaster, Goldbeaters' Skin, and Surgical Plasters, Surgical Instruments and Medical Glass,

LONDON AND MANCHESTER.

MATHER'S NIGRINE
A JET BLACK MARKING FLUID,
FOR MARKING LINEN, COTTON &c
NO PREPARATION OR HEATING REQUIRED AFTER BEING WRITTEN.

Nigrine obtained Hon. Mention, Paris Exhibition, 1878.

ALL CHEMISTS & STATIONERS
SELL

MATHER'S NIGRINE.

IN BOTTLES AT

6d., 1s., 2s. 6d. & 5s. each.

Samples sent post free on receipt of
Thirteen Stamps.

Ladies will find an interesting and agreeable occupation in using MATHER'S NIGRINE for Etching Fern Leaves, Rustic Scenery, Views, &c., on cloth, which may be used for dessert doyleys, antimacassars, toilet mats, and sundry other ornamental and useful work, as, from the finer lines remaining distinct after repeated washing, very satisfactory results may be obtained from this fluid, which is not the case with any other marking ink.

The following **ADVANTAGES** are Gained by Using

MATHER'S NIGRINE.

- 1st.—**NO WARM IRON** or **HEATING** required.
- 2nd.—**NO PREPARATION, MIXING, or WASTE.**
- 3rd.—**NO fear of SCORCHING or BURNING** the Cloth.
- 4th.—Can be used with a **STEEL or QUILL Pen, BLOCKS, or STENCIL PLATE**, for Monograms.
- 5th.—**THE BOTTLES** contain **DOUBLE** the **QUANTITY** of ordinary Marking Inks.
- 6th.—Becomes, when washed, a **JET BLACK**, which gets **DARKER** with repeated washings and age.
- 7th.—**Cannot be removed by ANY CHEMICAL MEANS.**
- 8th.—**Will Not Injure** the most delicate Fabric.
- 9th.—**Flows Readily** from the Pen.

TRADE PRICE OF
MATHER'S NIGRINE.

Per dozen—
3s. 6d., 7s., 18s., 36s.

A Liberal Discount to Large Buyers.

Extract from *The Lancet*, Jan. 5th, 1878.

NIGRINE.
A Jet-Black Marking Fluid.
(Wm. MATHER, Farringdon Road, London.)

We can recommend this as a very good and convenient Marking Ink. We have submitted Linen marked with it to some of the most powerful of Chemical Agents, including Acids, Alkalies, and Chlorine, and Cyanide of Potassium, and have found that it was very much easier to destroy the Linen than the marking upon it; in fact, the writing could not be effaced by any of the agents we employed.



ALL "MATHER'S NIGRINE"

Will stand Boiling in the following Solutions, whereas Marking Inks made with Silver will not:—

SOLUTION:
Cyanide of Potassium,
Caustic Potash,
Caustic Soda,
Chloride of Lime or
Bleaching Powder.

MATHER'S IMPROVED FEEDING BOTTLE, SIXPENNY SIZE, 3/6 PER DOZ.
MATHER'S IMPROVED FEEDING BOTTLE, SHILLING 6/-
MATHER'S LATEST IMPROVED NEW FEEDING BOTTLE, "THE PRINCESS,"

With Porcelain Fittings, 7s. per doz. | With Boxwood Top Corks, 3s. 6d. per doz.

With Pure Tin Screw Cap and Patent Valve, 12s. per doz.

MATHER'S CHEMICAL FLY PAPERS { For Poisoning Flies, Wasps, } **20/-** { Per 1,000 }
MATHER'S ROYAL BALSAMIC PLAISTERS, ON LEATHER. { Ants, Mosquitoes. } Sheets.

SPECIALITIES.

MATHER'S Adhesive Spread Plaster.
MATHER'S Alexandra Breast Exhauster.
MATHER'S Balsamic Plaisters.
MATHER'S Bunion Plaisters.
MATHER'S Benzoline.
MATHER'S Cod Liver Oil Plaisters.
MATHER'S Cough Lozenges.
MATHER'S Corn Plaisters.
MATHER'S Court Plaster.
MATHER'S Chemical Fly Papers.
MATHER'S Chlorodyne Lozenges.

MATHER'S Chest Protectors.
MATHER'S Emp. Cer. Saponis.
MATHER'S Elastic Gum Bongies.
MATHER'S Elastic Gum Catheters.
MATHER'S Elastic Stockings, Belts, &c.
MATHER'S Flesh Gloves and Rubbers.
MATHER'S Indiarubber Syringes, &c., &c.
MATHER'S Indiarubber Teats, &c.
MATHER'S Indiarubber Tubing.
MATHER'S Marking Ink.
MATHER'S Nelson's Improved Inhaler.

MATHER'S Oriental Rose Cream.
MATHER'S Poor Man's Plaisters.
MATHER'S "Princess" Feeding Bottle.
MATHER'S Pill Machines.
MATHER'S Perfumes in bottle and bulk.
MATHER'S Rose Cream.
MATHER'S Root and Drug Cutter.
MATHER'S Sponge Bags.
MATHER'S Tincture Presses.
MATHER'S Violet Powder.

TEN PER CENT. DISCOUNT FOR CASH.

SPECIAL QUOTATIONS TO WHOLESALE AND EXPORT BUYERS.

On the 1st of March, 1st of June, 1st September, and 1st of December, is published MATHER'S QUARTERLY PRICES CURRENT, comprising Druggists' Sundries, Medical Glass Ware, Perfumery, Surgical Plaisters, &c., &c. Chemists and Druggists not receiving it in due course are respectfully requested to forward their names and addresses to Publishing Department, FARRINGTON ROAD, LONDON, when they will be placed on the Register for regular transmission.



Index to Advertisements.

February 15, 1879.

(A)

| | | |
|--|----------------------------------|--------|
| ACTIEN-GESELLSCHAFT FUR ANILIN FABRIKATION | Potent Malachite Green | 74 |
| ALLEN & HANBURY'S | Cod-Liver Oil | 81 |
| ALLEN & HANBURY'S | Unguentum Petrolei | 88 |
| ALLEN & HANBURY'S | Jujubes | 5 |
| ALLEN, R. J. | Bronze Powder, &c. | 31 |
| ALTHAUS, J. | Works on the Nervous System, &c. | 18 |
| ANALYTICAL SANITARY INSTITUTION | TEXT | 68 |
| ANSTIE, E. & W. | Tobaccos | 46 |
| ASSISTANTS WANTING SITUATIONS | | 15, 16 |
| ATKINSON, G., & CO. | Chemists | 75 |
| ATTFIELD | Attfield's Chemistry | 18 |

(B)

| | | |
|-----------------------------|---|----------|
| BAGLEY, WILD & CO. | Glass Bottles | 90 |
| BAILDON, H. C., & SON | Apertent Fruit Lozenges | 40 |
| BAILEY, W. H., & SON | Trusses | 62 |
| BARBER, T. | Vermin Killer, &c. | 39 |
| BARNETT, SON & FOSTER | Soda Water Machinery, &c. | 51, 93 |
| BARRETT & ELLERS | Patent Stopper Aerated Water Bottles, &c. | 49 |
| BARRON, SQUIRE & CO. | Wholesale and Export Druggists | 79 |
| BARTLE, G., & CO. | Nitrous Oxide Gas | 22 |
| BATTLE, J. R. | Vermin Killer | 39 |
| BATTLE & WATTS | Wholesale Druggists | 79 |
| BEDDARD, J. | Health Saline, Tooth Paste | 46 |
| BEECHAM, T. | Pills | 83 |
| BEST, W., & SONS | Natural Mineral Waters | 42 |
| BEWLEY & DRAPER | Dichroic Ink | 64 |
| BILLING, DR. | Deodorising and Disinfecting Fluid | 39 |
| BOND'S DAUGHTER | Caution—Marking Ink | 25 |
| BOSTON JOURNAL OF CHEMISTRY | | 72 |
| BOUDAULT, H. | Pepsine | 69 |
| BOURNE & TAYLOR | Respirators, Chest Protectors, &c. | 35 |
| BOWLES & CROSS | Medical and General Printers | 22 |
| BRADLEY & BOURDAS | Plate Powder | 31 |
| BRANSON | Coffee Extract | 42 |
| BRETT, F. J. | Transfer Agent and Valuer | 14 |
| BRETT, H., & CO. | Rectified Spirits of Wine | 24 |
| BRIKSTOW, T. F., & CO. | Toilet Soaps and Perfumery | 31 |
| BROOK & CO. | Dandelion Coffee | 42 |
| BROWN, S. S., & CO. | Lint Mills—Notice | 87 |
| BUCK, F. | Dentistry | 45 |
| BULLOCK, J. L., & CO. | Hospital Inhaler | 88 |
| BULLOCK, LLOYD & CO. | Pepsine Porci | 88 |
| BURGESS, WILLOWS & FRANCIS | Wholesale Druggists | 76 |
| BURROUGH, J. | Chemically Pure Sp. Vint Rect. | 24 |
| BUSINESSSES FOR DISPOSAL | | 15 |
| BUTCHER, W., & CO. | Homeopathic Medicines | 68, TEXT |

(C)

| | | |
|--|--|--------|
| CADBURY BROS. | Cocoa Essence | 98 |
| CANTRELL & COCHRANE | Mineral Waters | 51 |
| CENTRAL SCHOOL OF CHEMISTRY AND PHARMACY | | 18 |
| CENTRETON, J. | Higginson's Emetics | 45 |
| CHEMIKER-ZIETUNG (GOTHEN) | | 70 |
| CHEMISTS' AERATED MINERAL WATERS ASSOCIATION | | 47 |
| CHESEBROUGH MANUFACTURING CO. | Vaseline | 4 |
| CHISLETT, J. R. | Respirator and Inhaler | 82 |
| CHOCOLAT MENIER | | 70 |
| CLARKE, F. J. | Blood Mixture | 12, 84 |
| COLE, G. | Pucking Cases | 52 |
| COLLINS, CHAS. | Microscope Manufacturer | 22 |
| CONDY, R., & CO. | The Cheapest Condy's Fluid | 38 |
| CONDY'S FLUID CO. | Judgment on Appeal, &c. | 8 |
| COOPER, W. | Sheep Dipping Powder | 37 |
| CORBYN, STACEY & CO. | Syrupus Chloralis—Liebreich, Pepsin-Essenz, Chaulmoogra Oil, &c. | 1, 71 |
| COX, A. H., & CO. | Tasteless Pills | 28 |
| CRAYEN, M. A. | Wholesale & Export Confectioner | 42 |
| CRAWSHAW, E., & CO. | Crystal Dyes—Notice of Removal | 26 |
| CRITCHLEY, T. | Starch Gloss | 46 |
| CUFF, J. H. | Mineral Waters | 52 |
| CURTIS, J., & SON | Chemists' Shop Fitter | 91 |

(D)

| | | |
|-------------------|-------------------------------------|----|
| DARLING, W. | Dentifrice | 28 |
| DARTON, F., & CO. | Scientific Instrument Manufacturers | 20 |
| DAYENPORT, J. T. | Chlorodyne | 85 |
| DAYENPORT & CO. | Soda Water Machinery | 51 |
| DAY, SON & HEWITT | Horse, Cattle, and Sheep Medicines | 36 |

| | | |
|-----------------------------|------------------------------|----|
| DIAMOND SOLUBLE CAPSULE CO. | Capsules | 86 |
| DINNEFORD & CO. | Solution of Magnesia | 81 |
| DOBELL, DR. | Works on the Heart and Lungs | 15 |
| DOWS, CLARK & CO. | Soda Water Machinery | 50 |
| DUNCAN, FLOCKHART & CO. | Chloroform, &c. | 77 |
| DUNN & CO. | Manufacturing Chemists | 76 |

(E)

| | | |
|------------------------------|-------------------------------|----|
| ELLIS & SON | Aerated Waters | 53 |
| EMPLOYERS WANTING ASSISTANTS | | 15 |
| ENTWISTLE BROS. | Mechanical Dentistry | 16 |
| ERHARDT & CO. | Vegetable Parchment and Skins | 37 |
| ESSEX FLOUR & GRAIN CO. | Flour of Egyptian Lentils | 41 |
| EVANS, J. | Extract of Malt | 84 |
| EVANS & CO. | Cigarette Machine | 45 |
| EVANS, R., & CO. | Chemists' Specialties | 54 |
| EVANS, SONS & CO. | Wholesale Druggists | 78 |
| EWEN & SONS, J. | Clarified Lard, &c. | 24 |

(F)

| | | |
|------------------------------------|------------------------------------|----|
| FARINA, J. M. | Eau de Cologne | 60 |
| FAULDING & CO. | Wholesale Druggists | 68 |
| FENNINGS, A. | Children's Powders, &c. | 98 |
| FERRE, J. | Injection Brou. | 68 |
| FERRIS, BOORNE, TOWNSEND & BOUCHER | Pure Thymol Soap | 6 |
| FIELD, J. C. & J. | Ozokerit, Candles and Toilet Soaps | 94 |
| FIELD, J. C. & J. | Ozokerine | 9 |
| FINCH, RICKMAN & CO. | Mustard | 43 |
| FOX, G. W., & CO. | "Palatable" Cod-Liver Oil | 82 |
| FRANCIS, J. | Printing Presses | 49 |
| FRANKS & CO. | Dr. Nichol's Sanitary Soap | 38 |
| FRIQUET & CO. | Soda Water Apparatus, &c. | 48 |
| FRY & SONS | Chocolate and Cocoa | 43 |

(G)

| | | |
|---------------------------------|--------------------------------|----------|
| GABRIEL & TROKE | Wholesale and Export Druggists | 90 |
| GAS PURIFICATION & CHEMICAL CO. | Bi-Sulphide of Carbon | 76 |
| GENERAL MINERAL WATERS | | |
| DEPOT | Reduction in Prices | 68, TEXT |
| GEORGE, J. E. | Pills | 86 |
| GERRARD & JOHNSON | Shop Fitters | 92 |
| GIBSON, R. | Medicated Lozenge Manufacturer | 44 |
| GILLOTT, J. | Pens | 45 |
| GODDARD, J. | Chemists' Price Book | 18 |
| GODDARD, J. | Plate Powder | 31 |
| GOOSEY & ROGERS | Plasters, &c. | 70 |
| GOSSLING & SON | Horse and Cattle Medicines | 37 |
| GOULD, E., & SON | Homeopathic Review | 22 |
| GOULD, E., & SON | Homeopathic Chemists | 68, TEXT |
| GRAY, P. | Artificial Ley Maker | 89 |
| GRIMWADE | Transfer Agent and Valuer | 14 |

(H)

| | | |
|-----------------------|--|----|
| HARRISON, W. B. | Norwegian Block Ice—Mineral Waters | 53 |
| HARRIS, P., & CO. | Zinci Oxyd. (Harris's) | 65 |
| HART, J. W. | Isinglass | 42 |
| HAY, W. | Concentrated Essence of Jamaica Ginger | 53 |
| HAYWOOD, J. S. | Elastic Stocking Maker, &c. | 44 |
| HEALD, A. J. | Dog Medicines | 39 |
| HILL, E. | Vermin Killer | 24 |
| HINDLEY, E. S. | Small Steam Engines | 50 |
| HIRST, BROOKE & HIRST | Orange-Quinine Tonic Wine | 40 |
| HISCOCK, A. | Linoleum and Corticine | 44 |
| HOGG | Lithia Water, &c. | 52 |
| HOLDEN, A. | Publisher | 27 |
| HOOPER & CO. | Mineral Waters | 1 |
| HOWLETT, S. | Shop Fitter | 92 |
| HUGGINS, R. | Ozone Paper and Cigarettes for Asthma | 82 |
| HUNT, W. F., & CO. | Pleated Paper Bottle Caps | 23 |
| HUNTER | Vermin Destroyer | 37 |

(I)

| | | |
|----------------|------------------------------|----|
| INGRAM & ROYLE | Price List of Mineral Waters | 98 |
| IZOD, J. | Meerschaum and other Pipes | 24 |

(J)

| | | |
|--------------------|-----------------------------------|-------|
| JACKSON, M., & CO. | Chemical and Scientific Apparatus | 29 |
| JACKSON, T. S. | Wood Stains | 28 |
| JAHNCKE, ERNST. | War Vestas | 61 |
| JAMES, LIEUT. | Horse Blistering Ointment | 36 |
| JEWSEBURY & BROWN. | Tooth Paste | 26 |
| JOHNSON | Patent Hydraulic Filter | 74 |
| JUDSON, D., & SON | Artists' Black, Gold Paint | 6, 28 |

(K)

| | | |
|----------------------------|----------------------------|----|
| KEMP THORNE, PROSSER & CO. | Colonial Druggists | 71 |
| KEPLER MALT EXTRACT CO. | Malt Extract—Cod Liver Oil | 63 |
| KIDSTON, DR. | Shop Filter, &c. | 92 |
| KILNER BROS. | Glass Bottles | 91 |
| KING, C. J. | Human Hair Merchant, &c. | 29 |
| KROHNE & SESEMANN | Rubber Bandages | 88 |

(L)

| | | |
|------------------------------|---|----|
| LAMBE, J. B., & CO. | Scal Mottos for Mineral Water Bottles | 46 |
| LANG, J. & J. | Glass Bottles, Feeding Bottles, Enemas, &c. | 91 |
| LA TROBE, H. | Soluble Cocoa | 41 |
| LALOR, DR. | Phosphodyne | 82 |
| LARS BREKKE | Cod Liver Oil | 45 |
| LAZENBY, E., & SONS | Pickles and Sauces | 43 |
| LEATH & ROSS | Homoeopathic Medicines | 3 |
| LEITCHFORD & CO. | Milk Balsam | 41 |
| LEVERMORE BROS. | Precipitated Chalk | 74 |
| LINDSEY & SONS | Truss and Bandage Manufacturers | 89 |
| LLOYD, A. | Euresis | 30 |
| LOEFLUND, E. | Extract of Malt | 91 |
| LONDON HOMOEOPATHIC HOSPITAL | | 18 |
| LOW, SON & HAYDON | Perfumery | 7 |
| LOWE, R. H. | Pills | 45 |
| LYNCH & CO. | Enemas | 97 |
| LYNCH & CO. | Seabury & Johnson's India-rubber Porous Plaster | 73 |
| LYNCH & CO. | Medicated Papers | 73 |
| LYNCH & CO. | Trommer's Extract of Malt | 23 |

(M)

| | | |
|------------------------------|--|--------|
| MACFARLAN, J. F., & CO. | Pure Chloroform | 77 |
| MALTINE MANUFACTURING CO. | Maltine | 13 |
| MARSHALL, G. | Sir Astley Cooper's Antibilious Pills, &c. | 84 |
| MARTINDALE, W. | Portable Inhaler | 88 |
| MASSINGHAM, W. A. | Em's Pastilles | 16 |
| MATHEW, W. | "Narine" Marking Fluid, &c. | 32 |
| MAW, SON & THOMPSON | New Shoe Rooms | 10, 11 |
| MAY & BAKER | Manufacturing Chemists | 2 |
| METZ, PAUL | Willow Barks | 28 |
| MEURGEY & CO. | Acetate of Soda | 68 |
| MILLS & CO. | Bourne Aerated Waters | 52 |
| MISCELLANEOUS ADVERTISEMENTS | | 16 |
| MORSON, T., & SON | Specialities | 75 |
| MUDDIMAN, A. P. | Spanish Wash | 28 |
| MUMFORD, P., & SONS | Pure Crushed Linseed | 68 |
| MURPHY, J. | Marking Ink | 27 |
| MYERS & SOLOMON | General Merchants | 68 |

(N)

| | | |
|---|---------------------------------|--------|
| NELSON, DALE & CO. | "Home Comforts" | 43 |
| NESTLE, H. | Milk Food | 40 |
| NEUSTADT & CO. | Chemicals | 80 |
| NEWBURY & SONS. | Bicarbonates of Soda and Potass | |
| | —Berthol & Co.'s Perfume | 65, 66 |
| NEW YORK DRUGGISTS' CIRCULAR AND CHEMICAL GAZETTE | | 72 |
| NORTH BRITISH CHEMICAL CO. | | 74 |
| NUTTALL, C., & SONS | Teething Powders | 84 |

(O)

| | | |
|---------------|---------------------------|----|
| ODET, M. C. | Solution Odet | 68 |
| ORRIDGE & CO. | Chemists' Transfer Agents | 14 |

(P)

| | | |
|-----------------------|------------------------------|--------|
| PAGNY, WALLACE & CO. | Fin de Baudon | 71 |
| PARNALL & CO. | American Drug Mills | 41 |
| PEARCE, ALLEN & CO. | Druggists' Sundrymen, &c. | 59 |
| PETERSON & CO. | Sponge | 45 |
| PFLIEDERER, P. | Kneading and Molding Machine | 41 |
| PICKERING, J., & SONS | Polishing Paste, &c. | 31 |
| PLUMBAGO CRUCIBLE CO. | | 89, 45 |
| PULVERMACHER J. L. | Galvanic Chain Bands, &c. | 65 |

(R)

| | | |
|-----------------------|-----------------------------------|----------|
| RANDALL & SON | Black Currant Lozenges | 43 |
| RANDALL, SLOPER & CO. | Aerated Waters | 53 |
| RAYNER, L. | Shop Filter, &c. | 91 |
| RENDALL, J. M. | Theobromine or Concentrated Cocoa | 68 |
| RICHARDSON, J., & CO. | Liq. Scallis Ammon. | 96 |
| RIMMEL, E. | Perfumery | 27 |
| RITCHIE & POPE | Analysed Tea | TEXT, 68 |
| ROBBINS & CO. | Ethylate of Sodium | 81 |
| ROBERTS & CO. | Foreign Chemists | 69 |
| ROBINSON, B. | Dental Syringes, Corn Solvent | |
| | Pencils, &c. | 30 |
| ROBINSON & SONS. | Flax and Cotton Lint | 86 |
| ROGERS, J., & CO. | Medical Box Turners | 38 |
| RUBECK, H. | Oleum Caryoph. | 44 |

(S)

| | | |
|---|---------------------------------------|----------|
| ST. CLEMENT'S GLASS CO. | Medical Bottles | 90 |
| ST. THOMAS'S HOSPITAL MEDICAL SCHOOL | | 18 |
| SALTER, G. | Perfumery, &c. | 23 |
| SANGER & SONS. | Catalogue, Patent Medicines, &c. | 58 |
| SAVORY & MOORE | Special Preparations | 64 |
| SCHACHT & TOWERZEY | Liquor Bismuthi, &c. | 71 |
| SCHMEDES & CO. | Sarg's Glycerine, &c. | 5 |
| SCHOOL OF PHARMACY, BLOOMSBURY SQUARE | | 18 |
| SEABURY & JOHNSON | Porous and Spread Rubber Plasters | 95 |
| SILICATED CARBON FILTER CO. | 52, 56, 57, TEXT | 68 |
| SILVERLOCK, H. | Chemists' Printer | 22 |
| SLADE, T. | Anti-Asthmatic Cigarettes | 88 |
| SMITH, MR. | Tasteless Dandelion Pills | 24 |
| SMITH & GIBB | Pure Spirits of Wine | 24 |
| SMITH, T. H., & CO. | Salts of Morphia, &c. | 76 |
| SNOOK, G. F., & SON | Chest Protectors, &c. | 27 |
| SOUTHALL BROS. & BARCLAY | At Cod-Liver Oil, &c. | 64 |
| SOUTH LONDON SCHOOL OF PHARMACY, W. Bacter, &c. | | 19 |
| SPON, E. F. & N. | Pocket Book for Chemists | 18 |
| SPRATT | Dog Cakes, Poultry Meal, &c. | 39 |
| STEDMAN | Teething Powders | TEXT, 68 |
| STEVENS, P. A. | White Gutta Percha Enamel | 36 |
| SUSSEX DRUG CO. | Cobden's Quinine and Phosphorus Pills | 16 |
| SWAN & PROCTOR | Rectified Opium | 78 |
| SYMES & CO. | "Avaroba," &c. | 88 |
| SYMES & CO. | Ol. Lavand., Rect. | 16 |

(T)

| | | |
|----------------------|--------------------------------|----|
| TAYLOR, T. & F. J. | Aerated Waters | 53 |
| TERRY & CO. | Richmond "Gem" Cigarettes, &c. | 17 |
| TOMLINSON & HAYWARD | Luddington's Oils, &c. | 36 |
| TOMLINSON, R. | Druggists' Shop Filter, &c. | 92 |
| TOWLE, A. P. | Chlorodyne Lozenges, &c. | 80 |
| TREBLE, G., & SON | Shop Fittings, &c. | 93 |
| TRIPPIER, T. | Transfer Agent and Valuer | 14 |
| TULLY, J. | Teacher of Chemistry | 16 |
| TUPHOLME, B. | Oil Measuring Apparatus, &c. | 62 |
| TYLER, HAYWARD & CO. | Soda Water Machinery | 48 |

(V)

| | | |
|-------------------------------|---------------------|----|
| VAN DUZER & RICHARDS | Bay Leaf Water, &c. | 17 |
| VICHY NATURAL MINERAL WATERS. | | 68 |

(W)

| | | |
|---|---------------------------|--------|
| WALKER & DALRYMPLE | Tea Agency | 45 |
| WARNER & CO. | Sugar-Coated Pills | 67 |
| WATSON, R. W. | Marking Ink | 31 |
| WEST, THOMAS | Ocell's Mona Bouquet | 28 |
| WESTMINSTER COLLEGE OF CHEMISTRY AND PHARMACY | | 21 |
| WHEELER & CO. | "Line Juice Saline" | 55 |
| WHIFFEN, T. | Quinetum, &c. | 78 |
| WHITAKER & GROSSMITH | Perfumery | 26, 30 |
| WILCOX & CO. | Injection Brou, &c. | 70 |
| WILSON, MRS. | Female Pills | 86 |
| WOODS, W. | Arca Nut Tooth Paste, &c. | 28 |
| WYLEYS & CO. | Wholesale Druggists | 79 |

(Y)

| | | |
|--------------|-----------------------|----|
| YATES, W. S. | Chemists' Shop Filter | 40 |
|--------------|-----------------------|----|

(Z)

| | | |
|---------------------|---|----|
| ZIMMERMANN, A. & M. | Agents for the Chemische Fabrik auf Actien, Berlin—Schering's Celloidine, &c. | 81 |
|---------------------|---|----|

BOURNE & TAYLOR,

Wholesale and Export Druggists' Sundriesmen,

35 CASTLE STREET, HOLBORN, E.C.

B. & T.'s HIGGINSON'S ENEMAS.

| | | | | |
|---|-----|-----|----------|------|
| Black Rubber, in Slide Paper Boxes, with Shield and Vagina Pipe... | ... | ... | Per doz. | 32/- |
| Green Rubber, in Slide Cedar Boxes, with Vagina Pipe and Shield | ... | ... | " | 35/- |
| Green Rubber, in Slide Cedar Boxes (Disconnecting Mount), with Vagina Pipe and Shield | ... | ... | " | 37/- |
| The "Perfect" Enema (Disconnecting), in Slide Cedar Boxes, with Screw Vagina Pipe, | ... | ... | ... | ... |
| Child's Enema, and Rectum Pipe | ... | ... | " | 48/- |

B. & T.'s ROYAL HAYDOKESH or JAPANESE SOCK.

(Very saleable.) 4/- per doz. pairs. 2 doz. in a Glass Top Box.

B. & T.'s FLOATING LIGHTS.

Per doz., 4/- and 8/-. Command a ready sale. 2 doz., 6d., or 1 doz., 1/-, in a neat Show Box.

B. & T.'s MUSICAL TEETHING PAD.

A Teething Pad, Gum Ring, Whistle, and Rattle combined. Per doz., 4/-.

B. & T.'s ARECA NUT TOOTH PASTE.

B. & T.'s CHERRY TOOTH PASTE.

The Largest and Best in the Market. Per doz., 4/- and 8/-.

VIALS.

dr., 3/3; 2 dr., 3/9; ½ oz., 4/-; 1 oz., 5/-; 1½ oz., 6/-; 2 oz., 7/-. All of good quality, and securely packed in gross Boxes for convenient storage. Special quotation for 50 gross orders.

B. & T.'s NEW PERFUME BOTTLE

Panelled Lubins or Oldhams). 6 dr. and 12 dr., price 12/- and 16/- per gross. No charge for Name Plate if 4 gross of a size is ordered.

B. & T.'s GLYCERINE JELLY.

For Summer and Winter use. Per doz., 4/- and 8/-. Neatly put up in 1 doz. Boxes.

B. & T.'s SPRAY PRODUCERS, for Perfumes.

18/- and 20/- per doz.

B. & T.'s SPRAY PRODUCERS, for the Throat.

24/- and 27/- per doz. These are specially recommended for Throat Diseases.

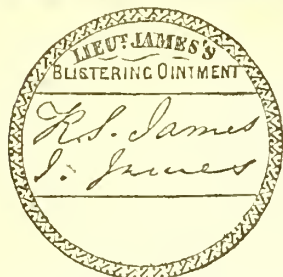
TEN PERCENT. DISCOUNT FOR CASH.

BOURNE & TAYLOR'S ILLUSTRATED CATALOGUE

Will be sent to any Chemist in the World on receipt of Business Card.

35 CASTLE STREET, HOLBORN, E.C.

ESTABLISHED 1833. HORSES.—LIEUT. JAMES'S BLISTER.



CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, Liverpool, and York, are now and have been Agents 45 years.

AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Son, 157 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoyne, Burdidge & Co., 16 Coleman Street; Lynch & Co., 17A Aldersgate Street; W. Mather, Farringdon Road, London, and Manchester; Tidman & Son, Wilson Street; Sanger & Son, 159 Oxford Street; Millard & Sons, 40 Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries' Company, Virginia Street, Glasgow; Boileau & Co., Bride Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Hunt & Co., 17 Westland Row, Dublin; Clarke & McMullen, Victoria Street, Belfast; D. Galbraith, Londonderry. And by all Chemists, in Pots, 1/6, 2/9, and 5/.

COLONIAL AGENTS:—MELBOURNE and WELLINGTON: Felton, Grimwade & Co.; SYDNEY, BRISBANE, and LAUNCESTON: Elliott Bros. & Co.; DUNEDIN and AUCKLAND: Kempthorne, Prosser & Co.; CALCUTTA: Smith, Stanistreet & Co.

H. S. JAMES, 31 Years Sole Manufacturer, STANFORD, FARINGDON, BERKS. Advertis'd in "Bell's Life" 45 years. Beware of a Spurious Imitation.

TRADE MARK



P. A. STEVENS, Chemist and Dentist, 70 HYDE ROAD, HOXTON, LONDON, N., Sole Proprietor and Maker of the SILVER WHITE GUTTA PERCHA ENAMEL for Stopping Decayed Teeth.

P. A. S. is prepared to supply the above to Wholesale Houses and Chemists, in any quantity, with their name stamped upon each stick, cut any length.

To be obtained of all Wholesale Houses. Price List and Samples sent post free. Special Terms to Shippers.
SPECIAL NOTICE.—The words SILVER WHITE GUTTA PERCHA ENAMEL are registered as a Trade Mark, and will be protected.

THE ORIGINAL "LUDDINGTON'S OILS," THE CELEBRATED HORSE, SHEEP, AND CATTLE MEDICINE

(REGISTERED).
Unrivalled as a Safe, Effectual, and Speedy Remedy for Colic, Gripes, and Gravel in Horses; Diarrhoea or Scour in Calves, Foals, Sheep, or Lambs; and is invaluable in cases of DIFFICULT LAMBING, FOALING, AND CALVING, it being a sure Preventive of Inflammation and Painful. Sold by all Chemists, in Bottles, 2s. 6d., 5s., and 10s. each. Sole Manufacturers and Exporters (for the Proprietor),

TOMLINSON & HAYWARD, LINCOLN, ENGLAND.
BEWARE OF SPURIOUS IMITATIONS.

THE "GLYCERINE DIP," FOR SHEEP AND LAMBS.

A Certain Preventive and Cure of Scab, Destructive to Ticks, Lice, and all Parasites infesting the Skins of Sheep, Cattle, and other Animals. Its Emollient and Stimulating Properties greatly Promote the Growth of the Wool, and being a Powerful Disinfectant it arrests the spread of Contagious Diseases. Sold by Agents in every Market Town. Price 6d. per pound. Sole Manufacturers and Exporters (for Hardwicke, Guerin, & Co.),

TOMLINSON & HAYWARD, LINCOLN, ENGLAND.

CHURNING MADE EASY!

TOMLINSON & CO.'S BUTTER POWDER,

Brings the Butter Quickly, Removes all Unpleasant flavour of Turnips, Cake, Mangolds, Wild Garlic, Dead Leaves, &c.; Increases the Quantity and Improves the Quality of Butter, so that Farmers and Dairymen may insure Good, Firm, and Sweet Butter all the Year round. Sold in Boxes, 3d., 6d., 1s., 2s. 6d., and 7s. 6d. each, by Chemists and Grocers. Sole Manufacturers,

TOMLINSON & HAYWARD LINCOLN.

HORSE, CATTLE, AND SHEEP MEDICINES.



BY ROYAL APPOINTMENT.

DAY, SON & HEWITT,



By Special Warrant,
Dated 27th December, 1865.

INVENTORS AND SOLE PROPRIETORS OF THE

By Special Warrant,
Dated 10th February, 1866.

"ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS,

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs.

Patronised for over 40 years by Royalty, and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 MEDICINE CHEST contains the following matchless remedies:—

- "CHEMICAL EXTRACT," for all External Injuries, and Ewes Lambing.
- "GASEOUS FLUID," for Colic, Scour, or Diarrhoea, and Debility.
- "RED DRENCH," for Cleansing Cows and Ewes, and for Inflammation.
- "RED PASTE BALLS," for Mares after Foaling, and Conditioning Horses.
- "BRONCHOLINE," for Husk or Hoarse in Sheep, Lambs, and Calves.
- "GASEODYNE," for Heaving and Paining, "CARMINATIVE CHALK," &c.

Price of Chest, with Guide to Farriery, £2 16s. 6d. No. 1 Complete Medicine Chest, in Polished Case, £6s. 6s. Horsekeeper's Chest, No. 4, £2 17s. 6d.

CARRIAGE PAID TO ALL PARTS.

Admirably adapted for all ordinary ailments among Stock, and each preparation can be had separately. Full and easy directions enclosed.

Patronised by Royalty and the leading Agriculturists of the British Empire, and awarded "Certificate of Merit" by the National Agricultural Society of Victoria, Australia, Spring Exhibition, 1871; President's Medal at the Spalding Show, July, 1872; Silver Medal, Manchester and Salford Show, November, 1874; Silver Medal, Preston Agricultural Show, June, 1875; Silver Medal, Northamptonshire Agricultural Society, Stamford Show, September, 1875; Silver Medal, Cheshire Agricultural Society, Crewe Show, September, 1875; Special Prize, National Agricultural Society of Victoria, Australia, Spring Exhibition, November, 1875; Medal, Cheshire Agricultural Society, Cheshire Show, 1876; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, Northumberland Agricultural Society, Newcastle-on-Tyne Show, August, 1877; Silver Medal, Knutsford Show, July, 1878; Medal, North Berwick Show, July, 1878; and Medal, Dairy Show, London, October, 1878.

CAUTION.—Beware of low-priced Imitations, and see that the name of DAY, SON & HEWITT is on all Bottles and Packets.

Prepared only by DAY, SON & HEWITT, 22 DORSET STREET, BAKER STREET, LONDON, W.,

And sold by Messrs. Burgoyne, Burdidge & Co., Barclay & Sons, W. Edwards, Newbery & Sons, Sanger & Sons, and all Wholesale Druggists, in London; Hood & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin and Auckland; Fairthorne & Co., Launceston.

CHEMISTS and DRUGGISTS

RESIDING IN

AGRICULTURAL DISTRICTS

Will save themselves much labour and trouble by introducing thoroughly
to **SPORTSMEN and FARMERS**

GOSTLING'S HORSE & CATTLE MEDICINES.

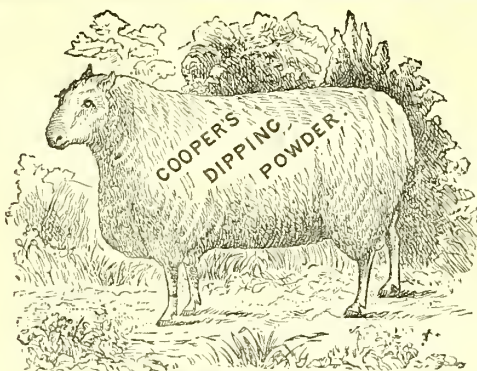
Some Chemists have entirely discontinued making their own, as they find GOSTLING'S both to pay them well and to please their customers. The Proprietors, GOSTLING & SON, of Diss, in Norfolk, will assist any Chemist in establishing a sale, by supplying Pamphlets, &c., for distribution.

TRADE PRICE LIST.

| | | per doz. |
|------------------------------------|---------------------|----------|
| | s. d. | s. d. |
| GOSTLING'S Cough Balls | sell 1 6 per packet | 14 0 |
| GOSTLING'S Condition Balls | " 2 6 " | 18 0 |
| GOSTLING'S Condition Balls | " 1 6 " | 12 0 |
| GOSTLING'S Shepherd's Friend | " 1 8 per bottle | 14 0 |
| GOSTLING'S Shepherd's Friend | " 3 0 " | 24 0 |
| GOSTLING'S Shepherd's Friend | " 5 0 " | 40 0 |
| GOSTLING'S Gangrene Oils | " 2 0 " | 16 0 |
| GOSTLING'S Condition Powders | " 2 9 per packet | 21 0 |
| GOSTLING'S Cough Powders | " 1 9 " | 16 0 |
| GOSTLING'S Diuretic Balls | " 1 6 " | 13 6 |
| GOSTLING'S Purging Balls | " 0 6 each | 4 0 |
| GOSTLING'S Grease Balls | " 1 0 per packet | 8 0 |
| GOSTLING'S Foot-Rot Ointment | " 2 0 per pot | 16 0 |
| GOSTLING'S Iodine Ointment | " 2 0 " | 16 0 |
| GOSTLING'S Gripe Drink | " 1 6 per bottle | 14 0 |
| GOSTLING'S Pig Powders | " 1 0 per packet | 9 0 |
| GOSTLING'S Pig Powders | " 2 6 " | 22 6 |

TERMS: 10 per cent. discount for Cash, 7½ per cent. at 6 months.
Special Terms, on application, for large quantities.

Wholesale Agents.—LONDON: Barclay & Sons, 95 Farringdon Street; Sewbery & Sons, 37 Newgate Street; Sanger & Sons, 150 Oxford Street; W. Sutton & Co., 10 Bow Churchyard; Butler & Crispe, 4 Cheapside; W. Edwards & Son, 38 Old Change; Hovenden & Sons, 93 & 95 City Road. YORK: Raimes & Co. EDINBURGH: Raimes, Blanshard & Co. LIVERPOOL: Raimes & Co. NORWICH: Smith & Sons, Magdalen Street. CHESTER: Grindley & Son. IPSWICH: Grimwade, Ridley & Co. BIRMINGHAM: Southall Bros. & Barclay. LEEDS: Goodall, Backhouse & Co. DUBLIN: McMaster, Hodgson & Co. THIRSK: W. Foggitt.



COOPER'S SHEEP DIPPING POWDER

Is soluble in Cold Water, and should be used in preference to any other Dip.

FOR TICKS, FLY, SCAB, AND FOR ALL OTHER SHEEP DIPPING PURPOSES.

This Dip has been in use upwards of 35 years, and has never been equalled by any other; it is of uniform strength, does not stain the wool, and is equally good as a Summer or Winter Dip. It is especially recommended for Dipping Lambs, and as a certain Cure for Scab.

In Packets to Retail at 1s. 4d. each, for 20 Sheep.

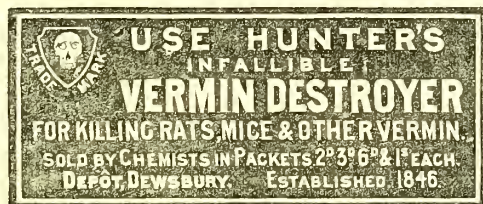
Counter Bills and Directions in English, Spanish, Dutch, &c., may be had free on application.

Terms and all particulars may be had of the Proprietor,
**WILLIAM COOPER, M.R.C.V.S., Chemical Works,
Berkhamsted, Herts.**

"UNSOLICITED TESTIMONIALS."

From MR. FROUD, Chemist,
Dorchester.

"Your Poison succeeds to admiration. It is as effective as an Infernal Machine."



From MR. SMITH, Chemist,
Glasgow.

"I have not kept any other 'Vermin Killer' than 'yours' for the last four years. It is the best I ever sold."

From MR. A. BILLINGTON, Chemist, Wakefield, Aug. 28, 1878.

"Dear Sir,—Please send me a few of your Vermin Killer registers. I can testify to the deadly effect of your 'Killer,' having one night laid in my warehouse the contents of a 2d. packet, and found in the morning no fewer than 40 dead mice."

From MR. GEO. EAGLE, Merrickville, Sydney, Australia.

"To Mr. Mitchell, Druggist, Pitt Street, Sydney—Sir,—I promised to let you know how 'Hunter's Vermin Destroyer' acted. Its effect was wonderful; in one night it destroyed all the rats and mice about my house, which was swarmed with them."

SPECIAL CASH TERMS TO SHIPPERS AND WHOLESALE DEALERS.

Depôt—**WESTGATE and UNION STREET, DEWSBURY, ENGLAND.**

H. ERHARDT & CO., 9 BOND COURT, WALBROOK, LONDON, E.C.,

Manufacturers of *Parchment, Skins, White Splits,* { For Tying over Jars
and Capping Bottles.

Vegetable Parchment

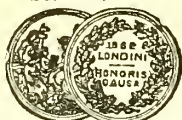
Tinfoil & Tinfoil Paper

Also Agents for **CHEMICALLY PURE TINFOIL**, as thin as 90 square feet to the lb.

MIXED & LEAD FOIL & FOIL PAPER. COLOURED CAPPING & FANCY PAPERS.

Samples and Prices post free on application.

LONDON, 1862.



THE MEDAL.

The unauthorised use of these Medals is a
Punishable Offence.

PARIS, 1867.



SILVER MEDAL.

THE

Cheapest **Condy's Fluid** of All

IS SUPPLIED BY

R. CONDY & COMPANY,

8 STATIONERS' HALL COURT, LONDON, E.C.

REDUCED TRADE PRICES.

| | |
|---|---|
| Condy's Fluid, red, 1/- size, 4/- per dozen, net. | Condy's Ozonised Water, 2/- size, 8/- per doz. net. |
| " " " 2/- " 8/- " " | " " " 3/6 " 16/- " " |
| " " " 4/- " 16/- " " | |

Condy's Fluid Green at usual prices and discounts. Direct orders promptly attended to.

All Wholesale Houses supply our genuine articles at our Reduced Trade Prices.

NOTICE.—Chemists should specially order R. CONDY & COMPANY'S articles, which are listed by the principal Wholesale Houses.

R. CONDY & COMPANY is the only Company which supplies CONDY'S FLUID and CONDY'S OZONISED WATER composed of articles containing the same ingredients as the original.

The "PRACTITIONER" says—"Mr. Condy seems to have allowed himself to be outstripped in economical production."

DR. NICHOLS' SANITARY SOAP.

Since its introduction a year ago, the sale of this Soap has been extraordinary. It simply needs a trial.

Sold to the Public in 6d. and 4d. Tablets. Price to the Trade, 48s. and 32s. per Gross.

Proprietors—FRANKS & CO., 14 LITTLE TOWER STREET, LONDON.

J. ROGERS & CO.,

MEDICAL BOX TURNERS,

1, 2 & 3 CARTER STREET, WALWORTH, LONDON,

TURNERS OF EVERY DESCRIPTION OF TOOTH POWDER, PLATE POWDER, PILL AND PUFF BOXES
USED BY CHEMISTS, PERFUMERS, ETC.

PATENTEES AND MANUFACTURERS OF THE

SILICATED GREASE PROOF BOXES

These Boxes are made of White Wood, Silicated inside, rendering them quite Grease Proof, and will be found very convenient to send by post.

They are very light, being one-sixth the weight of covered pots.

They are not breakable.

The Lids fit quite air-tight.

They are made to stand any climate.

We have just issued a REVISED PRICE LIST for these and all other Boxes made by us. We are now able to make a considerable reduction on previous prices.

PRICE LIST ON APPLICATION.

CHEMISTS

Are invited to send to the Laboratory for a gratis supply of

"AMICUS CANIS"

for distribution amongst their clients. A demand for the MEDICINES almost invariably follows their circulation. The Pamphlet is neatly got up, and forms a welcome gift to all who keep dogs.



The Medicines may be obtained of the Wholesale Houses, or direct from the Laboratory for Cash.

WHOLESALE HOUSES

At home and abroad, by forwarding

"AMICUS CANIS"

to retail Chemists for distribution, will find a profitable demand created for the MEDICINES. Any quantity will be supplied gratis, with name of firm inside cover, on application at the Laboratory.

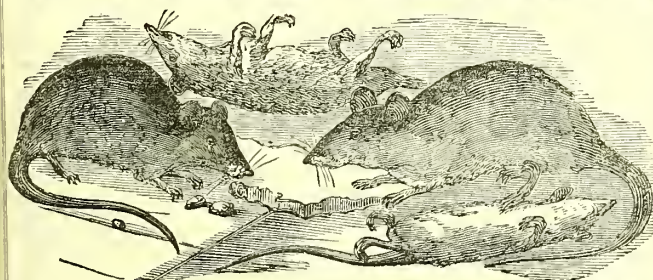
SPRATT'S PATENT MEAT "FIBRINE" DOG CAKES, POULTRY & GAME MEAL, DOG MEDICINES AND DOG SOAP.

"THE KENNEL MEDICINE CHEST" contains all our Medicines, also various Surgical Appliances.

Chemists will find that the above articles have a ready sale.

For Terms address—"SPRATT'S PATENT," Bermondsey, S.E., or your Wholesale House.

BATTLE'S VERMIN KILLER. { Mice eat it readily, and Die on the spot.



Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Farties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—Thousands might be published.

From Mr. THOMAS CORROX, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy; to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet. From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my barn. I enclose 2s. for two more Packets.—I enclose November 6th. I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.

No Chemist or Stockkeeper should be without a supply.

100 Rats destroyed for a Shilling by

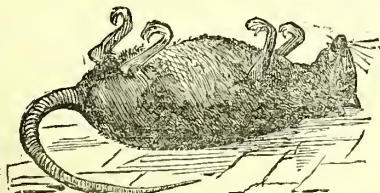
BARBER'S PHOSPHOR PASTE.

WRAPPED NEATLY FOR THE COUNTER.

You would never sell any other if you were desirous of pleasing your Customers.

CATS AND DOGS WON'T EAT IT.

KILLS RATS, BEETLES, &c.
THE DEAD VERMIN
DRY UP
WITHOUT SMELL.



Guaranteed the best
destroying Paste in
the world.

3d., 6d., 1s., 2s. 6d., and 5s. Tins. Also

BARBER'S VERMIN KILLER.

Kills Mice upon the spot. In packets, 3d., 6d., and 1s.

Testimonial from Her Majesty's Ratcatcher.

"Hampton, Middlesex, May 25th, 1870.—I have been more than forty years employed at Hampton Court Palace, the Royal Stables, and other buildings in and around the Royal Parks, for the destruction of rats, mice, and other vermin, and after trying all the rat poisons which I have heard of, I now use BARBER'S PHOSPHOR PASTE and VERMIN KILLER, with which alone I am able to keep these ancient palaces and national works free from vermin. (Signed) CHARLES SHONES."

WORKS, SALISBURY: ESTABLISHED 1848.

Special Quotations to Shippers. Supplied by all the London Wholesale Houses.

DR. BILLING'S INSTANTANEOUS DISINFECTANT & DEODORIZER

IS THE MOST RELIABLE AND THE CHEAPEST IN THE WORLD.

Harmless to furniture and linen. Does not stain. Harmless, colourless, and odourless, but powerful! It instantly deodorises and disinfects any material it is applied to, no matter how foetid or offensive! Destroys and neutralises instantly all poisonous gases, arrests decomposition, and prevents contagion. Reliable and safe in the sick chamber, the hospital, and for all sanitary purposes.

"ONLY ONE QUALITY—THE BEST!"

Price 2s. 6d. per quart bottle, sufficient to make two gallons of the best and cheapest disinfectant in the world. Special prices by the gallon or quantity. Send for circular of particulars.

OFFICES AND DEPÔT: 77 CANNON STREET, E.C.

MORGAN'S PATENT CRUCIBLES



HAVE RECEIVED AT EACH EXHIBITION THE HIGHEST AWARD made for CRUCIBLES. The quality is uniform, withstanding the greatest heat without danger, and they never crack. Porous Battery Cells, &c., are manufactured by

THE PATENT PLUMBAGO CRUCIBLE COMPANY,

BATTERSEA WORKS, LONDON, S.W.

TRADE MARK.

NESTLE'S MILK FOOD,

For Infants, Children, and Invalids.

London Depot—7 BARBICAN, E.C.

NESTLE'S MILK FOOD is prepared at Vevey, Switzerland, from the pure milk of Alpine fed cows, the finest wheaten flour and sugar, combined in exact proportions to imitate closely the natural food for infants. It is thoroughly cooked, and reduced to a fine powder, perfectly soluble in water, requires only the simple addition of water to prepare it for use—in this respect having the advantage over all other foods.

NESTLE'S MILK FOOD is highly recommended by the best medical authorities in all parts of the globe as a perfect diet. Nestle's is the original and genuine Milk Food or Powder. The extensive demand for this Food, its well known superiority and universal recognition by the medical profession, have produced the inevitable imitations. The trade and the public are hereby cautioned. Nestle's Milk Food has stood the test of years. Take no other under any pretence whatever.

NESTLE'S MILK FOOD is put up in tins, packed in lined cases specially for the export trade. Is highly concentrated and in a perfectly dry state. Will keep good in any climate.



Our Wholesale Agents at any port will pack and ship the Food to or for any part of the world.

Wholesale Depot: HENRI NESTLE, 7 BARBICAN, LONDON.

WHOLESALE AGENTS AND SHIPPERS:

Barclay & Sons, London
Jno. Sanger & Sons, London
F. Newbery & Sons, London
S. Maw, Son & Thompson, London
Jno. Thompson, London
R. H. Millard & Sons, London
Lynch & Co., London
Corbyn & Co., London
Grimwade, Ridley & Co., London
R. Hovenden & Sons, London
Evans, Lescher & Evans, London
G. Rosenthal, London

W. Sutton, London
Hodgkinson, Stead & Treacher, London
W. Edwards & Son, London
J. P. Werner, London
W. Mather, London
Peacock Bros. & Co., London
Burgoyne, Burdidge & Co., London
Tidman & Son, London
Rohlt, Brooks & Co., London
Horne & Sons, London
W. B. Cranwell & Co., London

Wyleys & Co., Coventry
Raimes & Co., Liverpool
John Thompson, Liverpool
Evans, Sons & Co., Liverpool
J. Halliwell & Co., Liverpool
Thompson & Capper, Liverpool
James Woolley, Sons & Co., Manchester
Jewshury & Brown, Manchester
Southall Bros. & Barclay, Birmingham
Goodall, Backhouse & Co., Leeds
Lofthouse & Saltmer, Hull

Evans, Gadd & Co., Exeter
Raimes & Co., York
Raimes, Blanchards & Co., Edinburgh
Duncan, Flockhart & Co., Edinburgh
John Mackay, Edinburgh
Apothecaries' Co., Glasgow
W. & R. Hatrick & Co., Glasgow
McMaster, Hodgson & Co., Dublin
Grattan & Co., Belfast
McMahon, Day & Co., Limerick
A. Demarchi Bros. & Co., Buenos Ayres, Monte Video, and Rosario

COLONIAL AGENTS

MELBOURNE: Felton, Grimwade & Co.; SYDNEY: Elliott Brothers; DUNEDIN: Kempthorne, Prosser & Co.; AUCKLAND: Kempthorne, Prosser & Co.
CALCUTTA: Smith, Stanistreet & Co.; MADRAS: Oakes & Co.

Wholesale Depot: HENRI NESTLE, 7 BARBICAN, LONDON.

ORANGE-QUININE TONIC-WINE.

"ORANGE-QUININE TONIC-WINE" manufactured by us henceforth will be sold without a Patent Medicine Stamp attached.

Neither a Patent-Medicine License nor a Sweets License will be required by Dealers for the Sale of it.

The Retail Price will be 2s. 6d. and 1s. 1½d. per bottle.
Wholesale, 24s. and 10s. 6d. per dozen.

HIRST, BROOKE & HIRST.

LEEDS, February 1st, 1879.

W. S. YATES,
Chemists' Shop Fitter, Shop Front Builder,
and Glass Show Case Maker.

PLANS AND ESTIMATES SUPPLIED FOR WORK IN ANY PART OF THE KINGDOM.

9 CAMDEN STREET, LIVERPOOL.

APERIENT FRUIT LOZENGES.

Prepared from the bark of the Rhamnus Frangula, a medicine which has been described on high authority as "the only real aperient we have"; all others usually classed under that name being drastic in their operation and often injurious in their after effect. They are extremely palatable, and children take them readily as a sweetmeat. "Mild and uniform in their operation."—*Lancet*. "The lozenge is an excellent and exceedingly mild form of laxative, especially suitable for children and delicate people."—*Birmingham Medical Review*. "They are very mild, and will probably be found very useful for children and delicate women."—*Medical Times and Gazette*. "These Lozenges are now extensively prescribed by several of the leading medical men in London and other cities. They are not to be considered a patent or quack medicine in any respect."—*The London Medical Record*.

The attention of the profession and of pharmacists is especially called to these Lozenges. They are extremely palatable. Children take them readily as a sweetmeat.

PREPARED BY

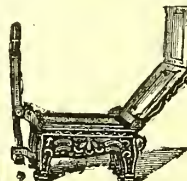
H. C. BAILDON & SON, Pharmaceutical Chemists
73 PRINCES' ST., EDINBURGH.

Sold in Boxes at 2s. & 3s. 6d. by all Chemists.

And in Bottles for Hot Climates, at 2s. 3d. and 3s. 9d. each.

AGENTS.—W. EDWARDS & SON, 157 Queen Victoria Street, London, E.C.
Montreal.—H. SUGDEN, EVANS & CO.

INTERNATIONAL EXHIBITION, 1870.
233, CLASS 3.



Every Man his own Printer
PRINTING PRESSES (all Iron) 25s.
complete, to £10 10s.
Specimens of Work, One Stamp.
Inventor
JABEZ FRANCIS, Rochford, Essex.
Type and Materials for Amateurs.
Amateur's Guide, 64 pp., 13 stamps.

PURE FLOUR OF EGYPTIAN LENTILS,

IN TINS OR IN BULK.

ESSEX FLOUR AND GRAIN COMPANY, LIVERPOOL ROAD, LONDON, N.

THE UNIVERSAL KNEADING AND MIXING MACHINE

(PAUL PFLEIDERER'S PATENTS),

is the most perfect Labour Saving Machine for the Kneading, Mixing, and Malaxation of Paints, Colours, Pill-masses, Lozenge-pastes, Plasters, Pastilles, &c., &c.

See THE CHEMIST AND DRUGGIST of July 14, 1877, page 290; also "Diary for 1879," pp. 12 and 13; also THE BRITISH AND FOREIGN CONFECTIONER, December 1, 1877, page 170.

FURTHER PARTICULARS ON APPLICATION TO

PAUL PFLEIDERER, 37 FARRINGDON STREET, LONDON, E.C.

AMERICAN DRUG MILLS,

of which nearly 1,000 have been sold in England
Since we introduced them in May, 1876.
Larger Sizes for Steam Power.



ADVANTAGES.

1. These American Mills grind faster than others of equal size.
2. Each Mill is supplied with two fly wheels, which prevents the strain being on one side.
3. They never require re-cutting, but keep sharp by being used: we can fit a new pair of Grinders for less than it would cost to have one of the old-fashioned Mills re-cut.
4. One pair of Grinders will last from seven to ten years.
5. They Grind fine or coarse by simply turning a Thumb Screw.
6. The interior parts can be opened for inspection in a few seconds.

Prices from 20s. each.

Beware of Spurious Imitations at Lower Prices.

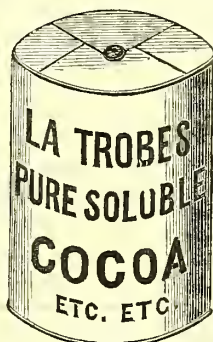
AGENTS:

J. M. PARNALL & CO.

106 & 108 VICTORIA STREET, BRISTOL, ENGLAND.

Drawings and Prices free on application.

LA TROBE'S PURE SOLUBLE COCOA.



Supplied to Chemists only, all other
Trades refused.

H. L. T.'s production stands
entirely upon its own merits, as
the Purest Cocoa manufactured.

That the Trade may have an
opportunity of testing, H. L. T.
sends samples for gratuitous
distribution amongst the medi-
cal profession upon receiving
from Agents a list of same.

Retailed in Canisters,
1s. and 2s.

La Trobe's
Pure Soluble Cocoa.

Also Manufacturer of

La Trobe's Highbury Bouquet,
La Trobe's Constitution Powder,
La Trobe's Cough Lozenges,
La Trobe's Plate Powder.

Price List, with Terms, on
application to

H. LA TROBE,
COTHAM, BRISTOL.

HONOURABLE MENTION, INTERNATIONAL EXHIBITION, 1862.

ISINGLASS

Of every description, suitable for CHEMISTS, GROCERS, BREWERS,
WINE COOPERS, &c., imported and cut by

J. W. HART, 5 St. Mary Axe, LONDON.

Orders accompanied by a remittance executed as under—

| | |
|---|---|
| R U S S I A N. | B R A Z I L. |
| No. 1, 13/- per lb.; No. 2, 11/6 per lb.; No. 3, 9/6 per lb. | No. 1, 5/9 per lb.; No. 2, 4/9 per lb.; No. 3, 3/6 per lb. |

PACKED IN SMALL BOXES, 1s. per lb. EXTRA.

BRANSON'S COFFEE EXTRACT,

For the Immediate Production of Fine and Pure Coffee.

Owing to completed improvements in its manufacture

BRANSON'S COFFEE EXTRACT

Is now specially prepared for use in hot climates, and is Guaranteed not to become oxydised nor fermented in any change of temperature. It is economical in use, there is no waste, and its permanent stimulant properties are more valuable than those of alcohol. Sold by all chemists in bottles at 1s. and 2s. each.

Wholesale Agents: Barclay & Sons, W. Edwards & Son, J. Sanger & Sons, F. Newbery & Sons,
E. Lazenby & Son, Crosse & Blackwell, London, and

LYNCH & Co., Aldersgate St., London.

BROOK & CO.'S DANDELION COFFEE

IS the Best and the Cheapest, containing three times the strength of ordinary Coffee. The above is highly recommended by the Medical Faculty as an Agreeable, Palatable, and Medicinal BEVERAGE. See Reports from Dr. Hassall, M.D., Author of "Food and its Adulterations," &c.; also, Otto Hehner, F.C.S., Analyst. Sold in Tins, 6d., 1s., 1s. 9d., by most respectable Chemists. Wholesale Agents: Goodall, Backhouse & Co., Leeds; Wm. Mather, London; Jas. Woolley, Son & Co. and W. Mather, Manchester; H. Glover, Son & Co., Bradford; and all Wholesale Houses.

Caution—See you get BROOK'S, as inferior qualities are often substituted.

MAKERS—BROOK & COMPANY, 76 HANOVER STREET, MANCHESTER.

Natural Mineral Waters of "Apollinaris," "Hunyadi Janos," Vals,

Vichy, Carlsbad, Seltzer, Kissingen, Homburg, Pullna, Friedrichshall, &c., direct from the Springs.

Also the ARTIFICIAL MINERAL WATERS prepared by Dr. STRUVE & CO., at the Royal German Spa, Brighton, and R. ELLIS & SON, Ruthin.

Appointed Agents for the celebrated "APOLLINARIS WATER."

W. BEST & SONS, Foreign Wine, Spirit, and Mineral Water Merchants, 22 Henrietta Street, Cavendish Square, London, W.

ESTABLISHED 1843.

M. A. CRAVEN,

Wholesale & Export Confectioner,

AND MANUFACTURER OF

MEDICATED LOZENGES, REFINED LIQUORICE, JUJUBES, &c.

PAVEMENT, CONEY ST., & COPPERGATE, YORK.

Lozenges of all descriptions made from Customers' private formulae (or ingredients) and stamped with name if required.

PRICE LIST ON APPLICATION.

"HOME COMFORTS."

A Small Volume with the above title has been published by Messrs. G. NELSON, DALE & Co., Gelatine Manufacturers, London. It contains more than one hundred short articles on matters of household interest, such as Cookery, Dress, Economy, &c., and the matter is interspersed with Woodcuts and well-tested Recipes. A Copy will be sent free on application to the Publishers.

SPECIAL NOTICE TO CHEMISTS & DRUGGISTS.

The Proprietors will be glad to forward a supply of these Books to any Chemist who will undertake their judicious distribution to the families in his district. Applications to be addressed to—

G. NELSON, DALE & Co.,

14 DOWGATE HILL, LONDON, E.C.

E. LAZENBY & SON'S PICKLES,

Sauces, and Condiments.—E. LAZENBY & SON, Sole Proprietors of the Celebrated Receipts, and Manufacturers of the Pickles, Sauces, and Condiments so long and favourably distinguished by their name, beg to remind the Public that every article prepared by them is guaranteed as entirely unadulterated. —92 Wigmore Street, Cavendish Square (late 6 Edwards Street, Portman Square), and 18 Trinity Street, London, S.E.

HARVEY'S SAUCE.—CAUTION—The

admirers of this Celebrated Sauce are particularly requested to observe that each bottle prepared by E. LAZENBY & SON bears the label used so many years, signed "ELIZABETH LAZENBY."

RANDALL'S BLACK CURRANT LOZENGES.

| | Net Cash. | To Acct. |
|--|-----------|----------|
| | s. d. | s. d. |
| Plain Black Currant, old square .. | 2 6 | 2 8 |
| " " " " rough oval .. | 2 6 | 2 8 |
| Black Currant and Ipecacuanha .. | 2 6 | 2 8 |
| Black Currant and Tannin.. .. | 3 0 | 3 3 |
| Black Currant Voice (warm astringent) .. | 3 0 | 3 3 |
| Black Currant Cough Lozenges .. | 3 6 | 3 10 |

(Ipecac. and Morph., strength as "B. P.")
In Bottles, 1 lb., 2 lbs., 4 lbs., and 7 lbs. For Exportation, in soldered tins, of any size, From EDWARDS, London; through any Wholesale house; and from the Manufacturers,

RANDALL & SON, Southampton,

Who will forward Samples by post on application.

Also, BROWN COUGH LOZENGES, 2s., 2s. 2d.; 7 lbs. stamped with name free.

N.B.—Medical Lozenges of every kind,

Including those of the Pharmacopœia of the Hospital for Diseases of the Throat, London.

MUSTARD.

FINCH, RICKMAN & CO.'S Genuine Qualities

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

6 Broken Wharf, Upper Thames St., London.

Gold Medal, Paris Exhibition.

FRY'S COCOA EXTRACT,

IN PACKETS AND TINS.

Pure Cocoa only, with the superfluous oil extracted.

This pure and delicious Cocoa, consisting exclusively of choice Cocoa Nibs from which the superfluous oil has been extracted, is strongly recommended to all who appreciate the full flavour and fine aroma of Cocoa.

"If properly prepared, there is no nicer or more wholesome preparation of Cocoa."—*Food, Water, and Air*, Edited by Dr. HASSALL.

J. S. FRY & SONS, BRISTOL & LONDON.

TRY ALSO

FRY'S CARACAS COCOA.—*"A delicious preparation."*

ROBERT GIBSON,
MEDICATED LOZENGE MANUFACTURER,
 CARLTON WORKS, HULME, MANCHESTER, AND 1 FINSBURY CIRCUS, LONDON,
 MAKER BY STEAM POWER OF MEDICATED AND HIGH-CLASS LOZENGES OF EVERY KIND.
Boiled Sugars, of the Finest Quality, Packed for Home or Export.
Fragrant Bouquet Lozenges, 100 in an Ounce, have an immense sale.

SUGAR WORM CAKES,

Keep in any Climate, give great satisfaction, and have an increasing demand, especially in Africa and Australia. Put up in Tins, each containing 6 Dozen or 12 Dozen Cakes.

Price List, sent by post on application.

Our Goods can be bought through any Wholesale House in London.

H. RUBECK

begs to call the
 attention of
 the Trade to his
 English-Drawn
 OIL
 OF CLOVES.

OLEUM
OLEUM
 FINEST
 ENGLISH
 DRAWN.



CARYOPH.

CARUI.

GUARANTEED

PURE AND

UNADULTERATED

It is guaranteed
 perfectly Pure, and equal
 to any other make
 both in quality and
 aroma,
 although considerably
 cheaper.
 It may be obtained of
 all the principal
 Wholesale Druggists.
 A fair trial is solicited.

LINOLEUM & CORTICINE,

FOR SHOPS, HALLS, CONSULTING ROOMS, &c.

THICK MATERIAL AND ELEGANT DESIGNS. WARM, NOISELESS, AND
 INDESTRUCTIBLE.

THE LOWEST PRICE LIST ISSUED. FORWARDED FREE BY POST.

A. HISCOCK,

22 WORMWOOD STREET, NEAR BROAD STREET STATION, E.C.

TO THE TRADE.

DUVAL'S
 SEVEN AGES

MILK-BALSAM.
 FOR THE HAIR.

A pretty novelty for ordinary daily use. It has the appearance of Milk, and is very agreeable in application, without the grossness of lime-juice preparations. It is not liable to separate, and is put up attractively in large Bottles at 1s., 1s. 6d., and 2s. 6d.

PROPRIETORS—

LETCHFORD & CO.,

63 WILSON STREET, FINSBURY, LONDON.



J. S. HAYWOOD,
 CASTLE GATE, NOTTINGHAM,
 Inventor and Manufacturer of
ELASTIC STOCKINGS, KNEE-CAPS,
LEGGINGS, &c.,

The most efficient means of supporting Varicose Vein,
 Weakness, Sprains, Dislocations, &c.

NEW IMPROVED ELASTIC ABDOMINAL
SUPPORTING BELT, REGISTERED,
 Always keeps its place.

TRUSSES, CHEST PROTECTORS, SURGICAL APPLIANCES,
AND SUSPENSORY BANDAGES, &c.,

Made to Order on the Premises.

List of Prices and Directions for Measurement forwarded
 upon application.

Greatest attention paid to SPECIAL ORDERS, which are
 invariably forwarded per return of Post.

INDEX TO ADVERTISEMENTS,

See pages 33, 34.

COD LIVER OIL.**NEW THIS SEASON, 1879.****GUARANTEED PURE. FILTERED.**

Prices per Barrel (25½ gallons), £5 10s., Free, Hull.

SAMPLES FREE ON DEMAND.**LARS BREKKE,
AALESUND (NORWAY).****CHEMISTS' TEA AGENCY.****BROKEN-LEAF TEA, 1s. 8d. per lb.**

A Money-saving Tea, absolutely pure, in half-pound packets 10d. The small leaf from fine India and China Teas, stronger, richer, and cheaper than any whole-leaf tea. Wholesale to Dealers and Sellers and Agents. 40 lbs. sent free to any railway station in the kingdom.—**WALKER & DALRYMPLE.** Warehouses—154 and 155 Whitechapel Road, London. P.O.O. payable at Head Office. Bankers—The National Provincial Bank of England. N.B.—Samples posted free.

**JOSEPH GILLOTT'S
STEEL PENS.**

Sold by all Dealers throughout the World.

Chemists and other Gentlemen who are obliged to lead sedentary lives will find a good and comfortable

corrective
in

FOR

**THE HEAD,
STOMACH & LIVER.****AN EXCELLENT PILL FOR
PROMOTING APPETITE AND DIGESTION.**

Sold by all Chemists and Patent Medicine Dealers, in Boxes, at 7½d., 13½d., and 2s. 9d. each; or post free from the Proprietor, **ROBERT HENRY LOWE**, 37 Bilton Road, Wolverhampton, upon receipt of the price in Postage stamps. Patent Medicine Vendors supplied with handbills with Name and address upon receipt of card or label.

ASSAY CRUCIBLES.**FOR COPPER.**

CORNISH FORM AND QUALITY.

Nest of Two { 3½ in. high, 3 in. diam. } 2s. per doz.
Single .. 2½ .. 2½ .. 1s "

All Forms and Sizes can be had.

FOR TIN.

3½ in. high, 3 in. diam. .. 6s. per doz.
Covers .. 1s. 6d. per doz.

FOR LEAD.

3 in. diam., with Covers .. 2s. 3d. per doz.
Other sizes to order.

FOR IRON.

| No. | High, in. | Wide, in. | Per doz. |
|-------|--------------|--------------|----------|
| A. .. | 3½ | 1½ | 0s. 10d. |
| B. .. | 3½ | 2½ | 1s. 1d. |
| C. .. | 4½ | 2½ | 1s. 6d. |

FOR GOLD.

THESE ARE PERFECTLY SMOOTH, AND OF THE CORRECT POROSITY.

| No. | Diam. in. | Height, in. | Per doz. |
|-------|--------------|----------------|----------|
| A. .. | 1½ | 1½ | 2s. 0d. |
| B. .. | 1½ | 1½ | 2s. 0d. |
| C. .. | 1½ | 1½ | 2s. 0d. |
| D. .. | 1½ | 2 | 2s. 0d. |

Covers for either size, 6d. per doz.

TO DENTISTS AND CHEMISTS.—Every description of Artificial Teeth made at greatly reduced charges. Best work and best materials only.

An Upper or Lower Set, inclusive of Teeth Rubber, &c., £1 1s. Ditto, ditto, on Platina, £2 2s.

Send for Price List.

Twenty years' experience in mechanical work.

LESSONS GIVEN IN MECHANICAL DENTISTRY.

F. BUCK, 6 Hanover Place, Upper Baker Street, London, N.W.

HIGGINSON'S ENEMAS,**BEST QUALITY,**

With Elastic Vagina Pipe and Shield and Bone Rectum Pipe, in Slide Cedarwood Boxes, per dozen 28s. Sample to any City Drug House for enclosure 34 stamps, or quarter dozen P.O.O. for 7s. Seamless White Teats, sample quarter gross post free 14 stamps.

JOHN CENTRETON.

204 CITY ROAD, LONDON, E.C.

See page 21.**SPONGE.****M. PETERSON & CO., Importers,**

66 SOUTH JOHN STREET,

LIVERPOOL.

For Home, Foreign, and Colonial Markets.

Wholesale only.**THE PATENT****CONCINNUM****CIGARETTE MACHINE.****AN ELEGANT PRESENT.**

Enables anyone to manufacture Cigarettes for Sale or own use.

30 from 1 oz. of Tobacco.**AGENTS:****S. MAW, SON & THOMPSON, AND F. NEWBERY & SONS.****PATENTEES AND SOLE MANUFACTURERS:****EVANS & CO., 60 ST. GEORGE'S RD., PIMLICO, LONDON**

**THE PATENT PLUMBAGO CRUCIBLE COMPANY, Sole Manufacturers under MORGAN'S PATENT,
BATTERSEA WORKS, LONDON, S.W.**

TO THE MINERAL WATER TRADE.

J. B. LAMBE & Co. desire to draw the attention of **LICENSEES** of **PATENT STOPPERED BOTTLES** to their

HONESTY
IS THE
BEST POLICY.

SEAL MOTTOES

OF WHICH THEY ARE THE ORIGINAL MAKERS.

SHORT RECKONING
MAKES
LONG FRIENDS.

The Article is made of good stout Board, while the Mottoes are numerous and varied, and packed carefully in Boxes of 5,000 each.

These Seal Mottoes are a great convenience, strengthening the cap label, and keeping the lips of the bottle free from dirt.

A Large STOCK is kept, and Orders can be supplied immediately on receipt.

| PRICE LIST. | | |
|-------------|---|----------------|
| 5,000 | : | 9d. per 1,000. |
| 25,000 | : | 8d. " |
| 100,000 | : | 6d. " |

Special Quotations for Larger Quantities. Samples will be sent on Application.

MANUFACTURERS OF EVERY DESCRIPTION OF LABELS, SHOW CARDS, &c., SUITABLE FOR THE TRADE

J. B. LAMBE & CO.,

CHROMO-LITHOGRAPHERS & GENERAL PRINTERS,

199 UPPER THAMES STREET, LONDON, E.C.

CHOICE PACKED TOBACCOS.

Best Birdseye, in $\frac{1}{4}$ lb. tins; also $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb. packets.

Superfine Birdseye, in $\frac{1}{4}$ lb. tins; also $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb. "

Imperial Birdseye, Foil, 2 oz., 1 oz.

"Yellow Honey from Down South." } In $\frac{1}{4}$ lb. tins; also
This Tobacco is the most highly esteemed } Foil, 2 oz., 1 oz.
in the States.

"Virgin State," Selected from the } In $\frac{1}{4}$ lb. tins; also
Finest Virginia Leaf. } Foil, 2 oz., 1 oz.

Superfine Oriental Returns, } In $\frac{1}{4}$ lb. tins; also
A Mild Smoking Tobacco. } Foil, 2 oz., 1 oz.

Fine Turkey Returns, Foil, 2 oz., 1 oz.

PACKED SHAG.

Superfine Shag $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb.

Fine Shag $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb.

Fine Ragg $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb.

Good Shag $\frac{1}{8}$ lb., $\frac{1}{16}$ lb., $\frac{1}{32}$ lb.

"Old Honest" $\frac{1}{8}$ lb., $\frac{1}{16}$ lb., $\frac{1}{32}$ lb.

"Uncle Tom" $\frac{1}{8}$ lb., $\frac{1}{16}$ lb., $\frac{1}{32}$ lb.

"Aunt Chloe" $\frac{1}{8}$ lb., $\frac{1}{16}$ lb., $\frac{1}{32}$ lb.

E. & W. ANSTIE,
MANUFACTURERS,
DEVIZES, WILTS.

ESTABLISHED ONE HUNDRED AND FIFTY YEARS.

THE WANT OF THE DAY.

Registered.



1d., 3d., & 6d.

MAKES STARCH LINEN AS NEW.

Starched Linen is made to Iron Easier, and is unequalled for Stiffness and Gloss. Sold by most starch sellers, at 1d., 3d., and 6d. each. Wholesale by the Proprietor,

T. CRITCHLEY,
CHEMIST & WHOLESALE DRUGGIST
BLACKBURN.

CAUTION!—Makers and Sellers of imitations will be prosecuted.

BEDDARD'S
SPRING & AUTUMN HEALTH SALINE.

Neatly put up in 6d. and 1s. Packets. *Very saleable.*

BEDDARD'S
BELGRAVIA TOOTH PASTE.

A MOST EXCELLENT DENTIFRICE.

Handsomely put up in large Jars. **ONE SHILLING EACH.**

LIBERAL TERMS TO TRADE, SPECIAL TO SHIPPERS.

PREPARED ONLY BY

JOHN BEDDARD,
46 CHURTON ST., BELGRAVE ROAD, LONDON, S.W

THE CHEMISTS' AËRATED AND MINERAL WATERS ASSOCIATION, LIMITED.

CAPITAL £5,000, in 5,000 Shares of £1 each, with power to increase.

The Directors will continue the issue of Shares at a Premium of 1s. per Share up to the 1st March; after that date a Premium of 2s. 6d. per Share will be charged until further notice.

Incorporated with Limited Liability under the Companies Acts of 1862, 1867, and 1877, whereby the liability of Shareholders is strictly limited to the actual amount of their respective Shares.

DIRECTORS.

HORACE DAVENPORT, Chemist, 33 Great Russell Street, London, W.C., *Chairman.*
HUGH DALZIEL, Chemist, The Laurels, New Thornton Heath.
WALTER BELSEY EDWARDS, Chemist, Wool Green, N.
GEORGE GOLDFINCH, Chemist, Hendon, N.W.

Managing Director.—THEODORE ROBERT ANCELL, Chemist.

Analyst and Consulting Chemist.—Dr. B. H. PAUL, 1 Victoria Street, Westminster, S.W., and 106 Fenchurch Street, E.C.

Solicitor.—WILLIAM HORSLEY, 11 Bull and Mouth Street, E.C.

Bankers.—LONDON AND SOUTH-WESTERN BANK, LIMITED.

Secretary.—J. H. BREFFIT.

Offices and Factory.—45 GIFFORD STREET, CALEDONIAN ROAD, LONDON, N.

ABRIDGED PROSPECTUS.

The objects of this Association are—First, to manufacture and supply to Shareholders who are Chemists, and to Hospitals, Aërated and Mineral Waters of specified formulæ and guaranteed quality.

Secondly, to deal generally in the Waters of the various mineral springs in Great Britain.

The only contract which has been entered into is a contract between the Company and Mr. T. R. Ansell, dated on or about the 6th August, 1878, which may be seen in the 46th Article of Association, which may be had at the Office of the Company.

TRADE CIRCULAR.

THE Directors have much pleasure in stating that they are now prepared to receive and execute orders from Shareholders. The greatest care has been taken in fitting up the Factory with the most improved machines, fitted with glass plungers and silver-lined cylinders, in order to entirely prevent metallic contamination. A perfect system of filtration has also been adopted.

The Association will be conducted strictly on co-operative principles—terms, cash with order. To save trouble and expense, and to give an advantage to large buyers, Shareholders can make payments on account in advance, upon which discount will be allowed at the following rates:—

Upon sums of £5 ... 2½ per cent. Upon sums of £20 ... 5 per cent. Upon sums of £50 ... 7½ per cent.

The balance at credit can be withdrawn at any time by giving three days' notice.

The Association does not pay carriage. Arrangements have been made for the present with Messrs. Carter, Paterson & Co., to deliver in London and the Suburbs, at the rate of 4d. per doz., Syphons 6d. per doz.; but when business justifies them, the Directors will make arrangements to deliver in the Company's own vans. Bottles will be charged and allowed for at the rate of 18s. per gross, and Syphons 24s. per dozen. Bin Cases as follows:—

3 dozen Cases, 3s. 6d. 4 dozen Cases, 4s. 6d. 6 dozen Cases, 5s. 6d.
1 dozen Syphon Cases, 2s. 6d.

All cases are numbered, but Return should be advised. Bottles, Syphons, and Cases must be paid for in advance; on no other terms could the Directors supply the Waters at the low prices quoted.

PRESENT PRICE LIST OF MANUFACTURED WATERS.

(Amount per Case required to be forwarded with Order.)

SYPHONS.

| | | | | | | | |
|-------------------------------|------------|--------------|--------|--------|-------------------------------|----------|--------------|
| Soda Water, B.P. | Per gross. | 3-doz. Case, | 4-doz. | 6-doz. | Soda Water, B.P. | Per doz. | 1-doz. Case, |
| Carbonated Water | 10/- | 10/6 | 13/10 | 19/6 | Carbonated Water | 1/3 | 27/9 |
| Potash do. B.P. | | | | | Potash Water, B.P. | | |
| Ginger Beer, Stone | | | | | Seltzer Water | Per doz. | 1-doz. Case, |
| Lemonade | Per gross. | 3-doz. Case, | 4-doz. | 6-doz. | Lemonade | 2/- | 28/6 |
| Seltzer Water | 12/- | 11/- | 14/6 | 20/6 | Ginger Beer | | |
| Lithia Water, B.P. | | | | | Lithia Water, B.P. | | |
| Lithia and Potash Water | | | | | Lithia and Potash Water | | |
| Magnesia do. | Per gross. | 3-doz. Case, | 4-doz. | 6-doz. | Magnesia do. | Per doz. | 1-doz. Case, |
| Quinine do. | 21/- | 13/3 | 17/6 | 25/- | Quinine do. | 2/6 | 29/- |
| Iron and Quinine do. | | | | | Iron and Quinine do. | | |
| Tonic do. | | | | | Tonic do. | | |
| Mineral Acid do. | | | | | Mineral Acid do. | | |

The above prices and arrangements are subject to such alteration as the Directors may from time to time consider advisable.

Shareholders can have the Waters supplied in plain bottles, their own labels put on if desired, and manufactured from their own formula.

A further Price List of Manufactured Waters will be forwarded shortly, when the Directors trust they will be able to announce they have made arrangements to carry out the second object of the Association, in bottling the principal Mineral Waters in England.

The Waters will be submitted to Dr. Paul for analysis, and his report published in the form of circulars, which will be forwarded each Shareholder for distribution amongst the medical profession in his district. Shareholders will oblige by stating the number of circulars required, together with description and address to be printed on counter-bills.

The Directors wish to remind and impress on Shareholders that the great benefits derived from co-operation largely depend on their individual efforts; they therefore trust that every Shareholder, in his own interest, and in the interests of the Association, will endeavour to extend his business, bearing in mind that only Chemists, with the exception of Hospitals, can participate in the benefits of the Association, and that the primary object is to supply Waters of guaranteed purity and recognised formulæ, equal to those of the best makers, at such low prices as co-operation could alone warrant. Shareholders will be in an exceptionally favoured position, as compared with Chemists outside the Association, in having a thoroughly reliable article to offer purchasers on far better terms than any private firm can supply them, and have consequently an inducement to introduce the Waters to the notice of the medical profession and the public.

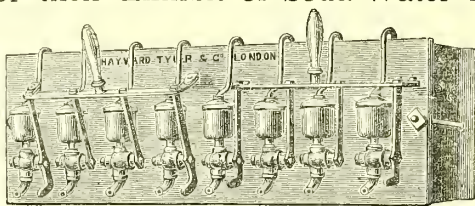
The Directors will be glad to receive suggestions from Shareholders, and also to know if patent bottles are required.

GOLD MEDAL

Awarded H. T. & Co., for their Exhibit of Soda Water Machinery at Paris, 1878.

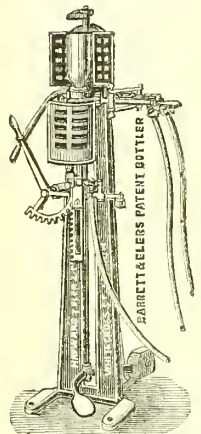


PARIS, 1878.

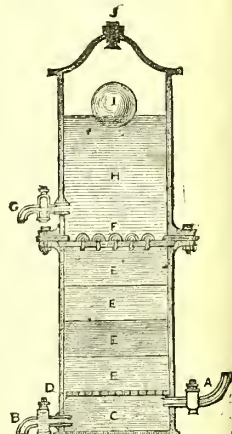
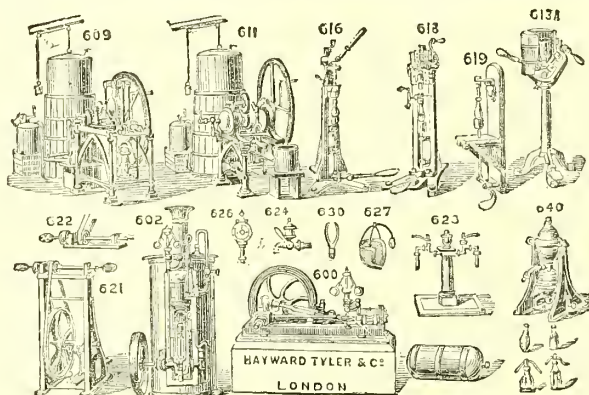


PARIS, 1878.

THE NEW & EXPEDITIOUS SYRUPING ARRANGEMENT.



BOTTLING MACHINE.



PATENT FILLER.

HAYWARD TYLER & Co., Whitecross Street, **LONDON.**

MONDOLLOT'S PATENT
Soda Water Machinery,
 Continuous System without Gazometer.

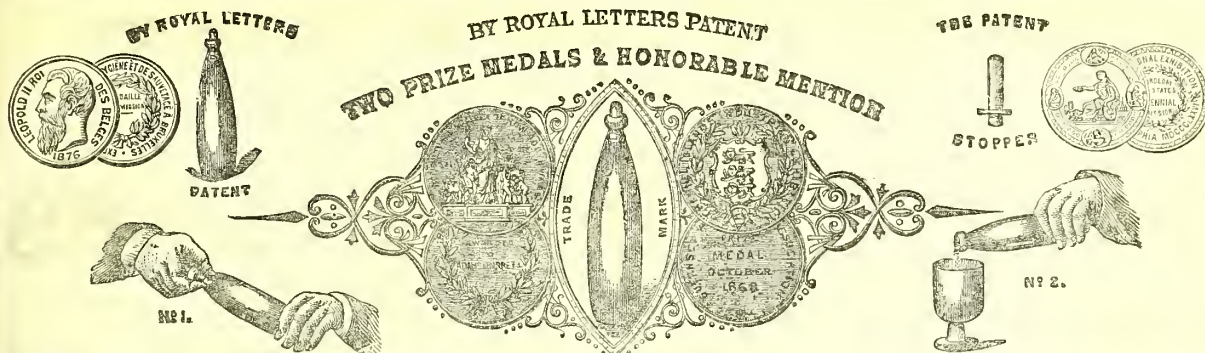
GOLD MEDAL AT THE PARIS EXHIBITION,
1878.

Full particulars on application to the Sole Agents,

MESSRS. L. FRIQUET & CO..

13 LITTLE JAMES STREET, BEDFORD ROW,
LONDON, W.C.

Sole Agents also for BRIET'S GAZOGENES and SYPHONS.



Note.—With a gentle pressure, as Shown in Diagram No. 1, the Stopper is pushed in, and the position as in No. 2 will empty the contents of the Bottle.

BARRETT & ELERS, 9 DACRE ST., WESTMINSTER.

By Royal Letters Patent



Dated June 2, 1874. No. 1923.

The Best,
The Cheapest,
The Cleanest
Stoppers
before the
Trade.

No Rubber
Rings that
come out or can
be taken out
of the necks.

Skilled labour
superseded.

Great Saving
effected.

LAMONT'S PATENT BOTTLE, &c.

Easily Filled,
Easily Opened,
Easily Cleansed
and Washed.

The Stoppers fit
perfectly, and
always fall in
their right
places in the
necks of
the Bottles,
thereby
preventing
leakages.



EBONITE STOPPER

GLASS STOPPER

THE NEW STOPPER

(On the LEFT in diagram)

Is made of Ebonite, which is perfectly non-porous, and from its elasticity and lightness it cannot break the Bottles, and will stand any pressure required to be put into them. It is a perfectly pure material, and when properly prepared and cured, and fitted with deodorized Rubbers, it does not in any way affect the contents of the Bottles as regards taste, &c.

THE GLASS STOPPERS

(On the RIGHT in diagram)

Have now been in very extensive use and demand for the last four years, and they can be recommended for their cleanliness, simplicity, and their general neat appearance; and from their peculiar construction—being very small and light at the ends—the breakage of Bottles is reduced to a minimum.

Licensees have the advantage of using one or all these Stoppers (except in certain places which applies only to the Wooden Stopper) under one License.

BARRETT & ELERS' FILLING MACHINES AND SYRUP PUMP COMBINED,

Have been proved to be the Best and Cheapest in the market, of which now upwards of 1,000 have been sold.

E. S. HINDLEY, BOURTON, DORSET.

SMALL STEAM ENGINES

(Economical in Fuel and in First Cost).

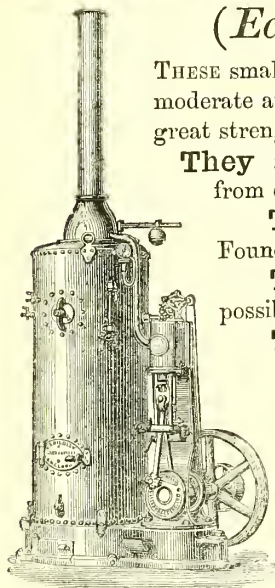
THESE small Engines are specially adapted for driving Soda Water Machinery wherever a moderate amount of cheap power is required. They combine simplicity, compactness, and great strength, are easily managed, occupy very little space, and require no fixing.

They are available at any time, as steam can be got up in half an hour from cold water.

They require no fixing, being erected on a Cast-Iron Water Tank Foundation.

They are simple in construction, and, having as few working parts as possible, are not likely to get out of repair.

They can be driven by a boy. Can be made to burn GAS instead of Coal.



| Nominal horse power... | 1 | 1½ | 2 | 3 | 4 | 5 | 6 | 8 | 10 |
|---|----|----|----|----|----|-----|-----|-----|-----|
| Engine and Boiler combined ..£ | 39 | 47 | 55 | 70 | 88 | 100 | 115 | 135 | 157 |
| Engine and Boiler on three Wheels, with Handle.....£ | 41 | 49 | 57 | 75 | 95 | 110 | 125 | 145 | 167 |

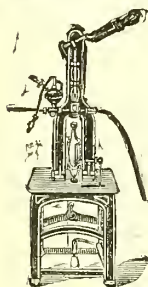
ALL SIZES IN STOCK—DELIVERED FREE TO ANY STATION.

Illustrated Catalogues with full particulars on application.



GOLD MEDAL SODA WATER MACHINERY.

Awarded Grand Medal of Progress
at Vienna, 1873.



Bottling Machine.

Seven First-class Medals awarded at various International Exhibitions over and above all other Machinery of the kind since 1862.

Soda Water made at a minimum cost by using these Machines.

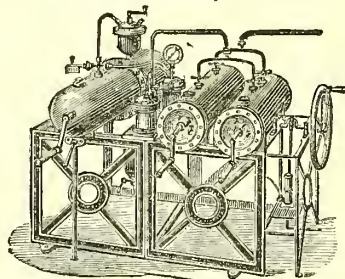
No Steam Power wanted.

Entire Saving of Coals.

Half the usual Labour.

Saves Breakage of Bottles.

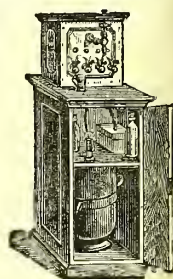
Simple in Construction.



TRADE MARK.
Generator and Bottling Cylinders.

Agents for Lamont's Patent Bottles, and Vaass & Littman's Ice Making Machines.

Sole Agents for Galloway's "Excelsior" Soda Water Machine, with Steam Engine combined, and "Universal" Double Pump Machine, Guaranteed to Make 40,000 Bottles per Day; also all other Specialties made by this celebrated House.



Cabinet Machine.

Cost of Machines Saved in one Season in Broken Bottles alone.

The undersigned are the only Manufacturers in Europe of the Improved Machines for Making, Bottling, and Drawing on Draught Aërated or Mineral Waters.

These Machines are lined with pure tin, the pipes are of pure tin, and every care is taken to make them as perfect as possible. For convenience, and saving of time and labour, these Machines are not excelled; therefore, for Makers of Soda Water, Lemonade, Ginger Ale, Seltzer, Potass, Vichy, and other Waters, they are invaluable.

Before purchasing send for Catalogue of 104 pages, post free, giving illustrations and prices.

NOTICE.—The Trade and all others are notified that no one has authority from us to manufacture any of our specialties; and anyone pretending to have such, and manufacturing the same, will be dealt with according to law. All are therefore safe only by dealing with the original Inventors and Manufacturers.

DOWS, CLARK & Co., 46 & 47 Frith Street, Soho, LONDON.

In our New Catalogue, just issued, will be found illustrations and descriptions of the various Machines for Making Aërated Waters and Bottling the same, Marble Machines for the Counter, of various designs and prices, Copper Cylinders and Coolers, Syphons and Fillers, Ice Safes, Silver-plated Counter Draught Tubes, Tumblers, and Silver-plated Holders, Measuring Taps, Ice Cream Freezers, Fruit Juices, Extracts for flavouring, and Fruit Syrups, for Export or otherwise. Patent Clamps for Bottles, Pressure Gauges, the Cabinet Machine for Clubs, Private Families, Messes, &c. Mineral Waters for Export. Bottles, Corks, Ginger Ale Extract, Gum Extract, for producing foam, Cider Extract, &c., &c.

Lime Juice Cordial and Syrup of the very finest quality.

Exhibitors at the Philadelphia Exhibition] **DRINKS FOR ALL CLIMATES.** [Agricultural Hall, Location L.
UNDER THE ESPECIAL RECOMMENDATION OF THE FACULTY.

SUPERCARBONATED MINERAL WATERS.

Manufactured and Sold Wholesale by **CANTRELL & COCHRANE,**

DUBLIN & BELFAST,

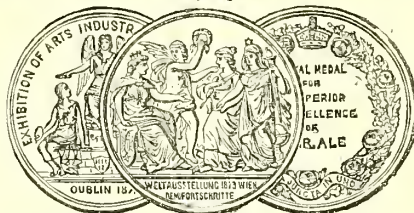
Makers of the Celebrated
AROMATIC

GINGER ALE.

CONTRACTORS FOR THE

Abyssinian Expedition.
Cunard Steam Ship Co.
Inman Steam Ship Co.
Montreal Steam Ship Co.
Oceanic Steam Navigation Co.
National Steam Ship Co.
Pacific Steam Ship Co.
Anchor Steam Ship Co.

Also Makers by Appointment
to His Excellency
THE LORD LIEUTENANT.



Soda Water, double.
Soda Water, single.
Kali, or Potass Water.
Lemonade.

Ginger Ale, Aromatic.
Aerated Sarsaparilla.
Aerated Quinine.
Aerated Tonic Bitters.

Supercarbonated Lithia Water.
Winter Beverage.
Royal Seltzer Water.
Chalybeate Water.

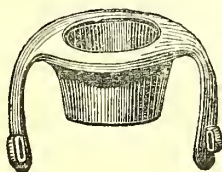
Carrara Water.
Aerated Dandelion.
Pulna Water.
Vichy Water.

Bismuth Water.
Lime Juice Syrup
Lime Juice.
Aromatic Orange Bitters.

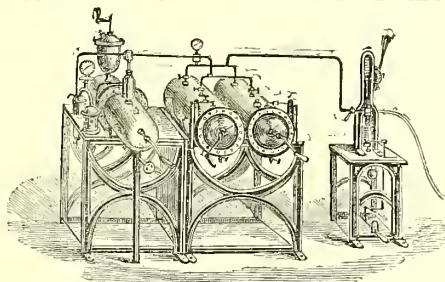
DUBLIN EXHIBITION, 1873.—The **ONLY PRIZE MEDAL** for "Superior Excellence" was Awarded to **CANTRELL & COCHRANE.** ALSO TWO PRIZES VIENNA EXHIBITION, 1873; AND THE GOLD MEDAL, PARIS MARITIME EXHIBITION, 1875. N.B.—Export Orders Packed in a most superior manner for all parts of the World.

SODA-WATER MACHINERY.

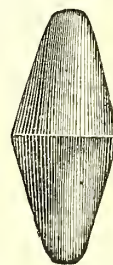
PATENT NOZZLE



FITS ANY BOTTLE.



THE STOPPER



GLASS OR EARTHENWARE.

GENERATOR, BOTTLING CYLINDERS, AND RACK.

DAVENPORT'S NOZZLE AND STOPPER (Horner's Patent) is the only Patent for utilising old Bottles, and converting them into Patents. No Corks or Wire, and saving entire cost in one season. The New Nickel-plated Nozzle makes this the most attractive Patent in use. Trial allowed. Prices and Royalty lowered. Send for Samples.

Catalogues of Soda-Water Machines, Ice-Making Machines, Engines, Boilers, Copper Cylinders, Syphons, Seltzogenes, Filters, &c., and all accessories to the Soda-Water Trade.

AGENTS FOR HAYWARD TYLER & CO.'S SODA-WATER MACHINERY.

Illustrated Catalogues, of sixty-four pages, post free to all parts of the World.

DAVENPORT & CO.,

Soda Water Machinists and Manufacturers and General Machine Agents,
99^N HIGH HOLBORN, LONDON.

SODA WATER BOTTLE (Codd's Patent).

TO THOSE ABOUT USING A PATENT BOTTLE!

Before deciding, judge of the many advantages that are to be found in this Patent over others. It is, without doubt, the only one that contains all the essentials to make it perfect, and it is therefore no wonder that over 500 Mineral Water Manufacturers in Great Britain alone have given up all other kinds in favour of this. It is the cleanest, as dirty wood or rubber does not go into the drink; there is scarcely any rubber exposed, therefore no taste, as in those stoppers that fall into the Bottle. The contents can be emptied without fear of stopper preventing outflow. The gaseous properties are retained in the drinks, as it is not thrown out of the Waters by the stopper falling into the Bottle, and many other advantages too numerous to mention.

PRICES ARE NOW REDUCED.

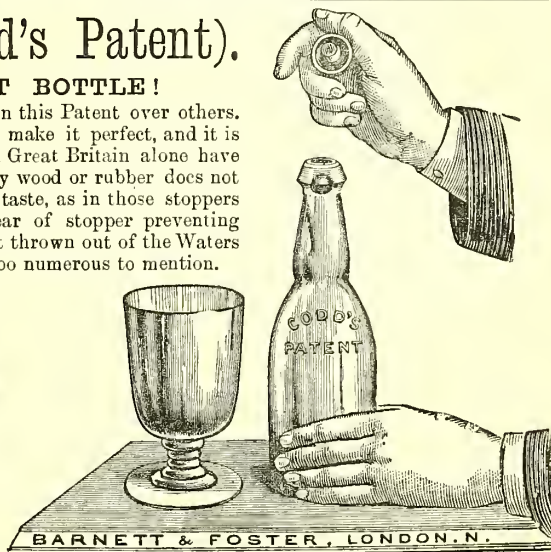
For further information, apply to

BARNETT, SON & FOSTER,

SOLE AGENTS,

23^T FORSTON STREET, SHEPHERDESS WALK,
LONDON, N.

Highest Prize Medal for Patent Bottles, Paris, 1878;
also Vienna, Philadelphia, Cape.



BARNETT & FOSTER, LONDON, N.

SOLE AGENTS.

G. COLE,
MANUFACTURER OF BOXES FOR CODD'S PATENT BOTTLES,
AND MAKER OF
ALL KINDS OF PACKING CASES
FOR THE SODA WATER TRADE.

N.B.—Orders executed with dispatch, and on the most reasonable terms.

STEAM WORKS:—

48 and 50 TRINITY STREET, ROTHERHITHE, S.E.



LITHIA, 5 grains (Liq. Lithia Effervescens, P.B.).
LITHIA, with Potash or Ammonia.
POTASH WATER, 15 grains.
CITRATE OF POTASH WATER.
CITRATE OF POTASH AND IRON WATER.
BROMO-CITRATE OF LITHIA WATER.
QUININE TONIC WATER.
SODA WATER, 15 grains in each Bottle, P.B.
MINERAL ACID WATER, flavoured with Orange, Lemon,
or Ginger; superior to Lemonade or Ginger Beer.

Orders for 6 dozen carriage free.

HOGG, 42 Connaught St., Hyde Park Square, London.

J. H. CUFF'S
MINERAL WATERS,
Atkinson St., Deansgate,
MANCHESTER.

SODA WATER
SELTZER WATER
POTASS WATER
15 grs.

LEMONADE
GINGER ALE
LITHIA WATER
5 grs.

LITHIA WATER WITH POTASS.
QUININE TONIC WATER, &c., &c.

SENT IN BIN CASES. NO PACKING REQUIRED.

Carriage paid on 12 Doz. assorted, or 6 Doz. of one kind.

Priced Lists free on application.

DISCOUNT ACCORDING TO QUANTITY.

SPECIAL TERMS FOR EXPORT ORDERS.

Attention is directed to Cuff's Soda, Seltzer, and Potass Waters, and Ginger Ale (the latter a speciality), all of which command a very extensive and ready sale.

Cuff's Waters are prepared expressly for a High-class Family Trade.

MILLS & CO.
BOURNE WATER,
THE PUREST IN ENGLAND.

MILLS & CO., Manufacturers of the
Original BOURNE ARTESIAN AERATED WATERS.

BOURNE SODA WATER, unequalled for
its natural Alkalinity.

BOURNE POTASH WATER—a Special
Remedy for Rheumatism and Gout.

BOURNE LEMONADE—Superior Quality,
made from the Fruit.

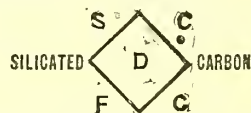
BOURNE LITHIA WATER—Specific for
the Gout. Guaranteed to contain a fixed quantity of Lithia.

BOURNE SELTZER WATER—The natural
Alkalinity of the Bourne Artesian Well Water, combined
with Artificial Salts, produces one of the best articles made.
This Seltzer Water is well adapted for invalids for its purity.
When taken at dinner-time, it promotes digestion.
Early in the morning, slightly aperient.

R. M. MILLS & CO., MANUFACTURERS, BOURNE.

J. Bell & Co., 338 Oxford Street;
Messrs. Padgett & Son, Wine Merchants, Wholesale
Agents, 27 Motcombe Street, London;
And their appointed Agents throughout the Kingdom.

SILICATED CARBON FILTERS.



Prize Medals—PARIS, 1867. HAVRE, 1869.

ADOPTED, IN PREFERENCE TO ALL OTHERS, by
the Admiralty, and used in the General Post Office, the London and
Provincial Hospitals, and many Public Establishments in various parts of
the World.

SILICATED CARBON FILTER COMPANY,
CHURCH ROAD, BATTERSEA, LONDON.

INDEX TO ADVERTISEMENTS,

See Pages 33 & 34.

HAY'S CONCENTRATED SOLUBLE ESSENCE OF JAMAICA GINGER

(Guaranteed Pure and Free from Capsicum).

Specially adapted for the manufacture of GINGER BEER, GINGER ALE, WINES, and CORDIALS. These, when made with this essence, are bright and transparent, and have the finest Jamaica Ginger flavour and aroma. It is also adapted for all Dietetic, Medicinal, and Pharmaceutical purposes.

DOSE.—Ten to Forty Minims.

Each fluid ounce of this Essence contains the aromatic constituent of 240 grains of Jamaica Ginger Root.

"Singularity free from resin."—*The Lancet*.

"It is really necessary that a superior Ginger Beer should be introduced to the public, and in Mr. HAY'S GINGER ESSENCE we find the very ingredient to bring about such a desideratum."—*Mineral Water Trade Recorder and Advocate*.

"Ginger Beer manufactured from this ESSENCE has the purest Jamaica Ginger Aroma distinguishable as soon as poured out. It is a leverage fit for any gentleman's table, and ought to attain great popularity."—*The Chemist and Druggist*.

"Contains the essential oil or AROMATIC CONSTITUENT OF THE ROOT, has the AROMA OF GINGER without the unpleasant taste of the resin, and is specially adapted for flavouring GINGER BEER."—*Pharmaceutical Journal*.

"It is a pure elegant preparation, and is free from resinous matter. Ginger Beer made with it is clear and transparent, has the aroma and flavour of the ginger, and is very pleasing to the palate."—*Medical Times and Gazette*.

"The Ginger Beer made with this purer TINCTURE OF GINGER is extremely grateful and palatable. It is clear and bright as water, and is certainly preferable to some wines we have tasted under the name of champagne."—*Medical Press*.

A COMPOUND ESSENCE, which is an addition of **Vanilla, Lemon, and other flavours**, is also prepared. It is strongly recommended for the manufacture of **Ginger Beer, Wines, &c.**—to which it imparts a peculiarly fine fruity flavour and aroma. Syrups and all Saccharine preparations of Ginger generally undergo speedy fermentation, but when made with either of these Essences, keep remarkably well.

TRADE PRICES:—Simple Essence, 5/- per lb.; Compound Essence, 5/6 per lb.

PREPARED BY

W. HAY, Chemist, &c.,

4 REGENT'S TERRACE, ANLABY ROAD, HULL.

"ABSOLUTELY PURE."

SEE ANALYSES. Sent post free on application.

ELLIS'S

CRYSTAL SPRINGS.



RUTHIN

Soda, Potass,
Seltzer, Lemon-
ade, also Water
without Alkali.
For GOUT,
Lithia Water, &
Lithia &
Potass Water.

WATERS.

REGISTERED.

CORKS BRANDED "R. ELLIS & SON, RUTHIN," and every label bears their Trade Mark. Sold everywhere, and wholesale of

R. ELLIS & SON, RUTHIN, NORTH WALES.

London Agents: W. BEST & SONS, Henrietta St., Cavendish Square.

PURE AERATED WATERS.

MANUFACTURED BY

T. & F. J. TAYLOR, NEWPORT PAGNELL.

ESTABLISHED 1836.

Purity and Excellence of the Water certified by Analysis by
PROFESSOR ATTFIELD, Ph.D., F.C.S.

NEWPORT PAGNELL SODA WATER, containing
10 grains of Bicarbonate of Soda in each bottle.

AERATED WATER, without Alkali.

POTASH WATER, containing 10 grains or 20 grains of
Bicarbonate of Potash in each bottle.

LITHIA AND POTASH WATER.

SELTZER WATER, prepared according to Analysis of the
Natural Water.

EFFERVESCING LEMONADE, superior in flavour
colourless, and warranted to retain its brilliancy.

Each Bottle is protected by a Label bearing the Signature of the Firm.

FOREIGN MINERAL WATERS.

FREDERICKSHALL (5 Cases, 6d. per Case less) 24/6 Case, 30 bot., 34/ Case, 60 1-bot
APOLLINARIS (20 Hprs., 1/- per Hpr. less) ... 25/ Hpr., 50 ... 39/ Hpr., 100 "

Hampers free, carriage paid; Empty Bottles, 6d. per dozen.

HUNYADI JÁNOS (10 Cases, 3-bts., 5/- less; 10 Cases, bts., 3/- each less)

30/- Case, 25 bts., ... 50/- Case, 50 1-bts.

SELTZER ... 11/6 Hpr., 25 ... 15/6 Hpr., 50 "

PULLNA ... 18/- Case, 20 ... 30/- Case, 50 "

VICHY ... 31/- " 50 ... 27/- " 50 "

CARLSBAD ... 37/6 " 50 "

KISSENGEN ... 27/6 " 50 "

SCHWALBACH ... 37/6 " 50 "

HOMBURG ... 40/- " 50 "

WILDUNGEN ... 40/- " 50 "

CARLSBAD SALTS, 1-bots., 21/- per doz.; 1-bots., 41/- per doz.; Bots., 80/- per doz.

FINE NORWEGIAN BLOCK ICE.

ORIGINAL BLOCKS, 2 to 3 cwt., each ... 2/6 per cwt

1 cwt. to 2 cwt., ... 3d. per lb. Under 1 cwt., ... 1d. per lb.

Packing and Mats for Original Blocks free; 3d. each allowed for Mats if returned

in good condition.

PRINTED DIRECTIONS for STORING ICE sent free on application.

W. B. HARRISON,

Importer of Ice & Mineral Waters,

6 BRIDGE STREET, SUNDERLAND.

RANDALL, SLOPER & CO.,

**SODA WATER MANUFACTURERS,
SOUTHAMPTON.**

GOODS FORWARDED CARRIAGE PAID WITHIN 80 MILES OF
SOUTHAMPTON, ON ORDERS OF 2 GROSS AND UPWARDS.

**Soda, Seltzer, Potash & Aerated Waters
supplied in Syphon Bottles.**

Importers of Hunyadi János, Friedrichshall, Vichy,
Pullna, Carlsbad, and other Foreign Mineral Waters,
supplied at Prices which will bear comparison with
London Rates.

PRICE LISTS FORWARDED ON APPLICATION.

CHEMISTS' SPECIALITIES.

NON-ALCOHOLIC, AERATED, AND PHOSPHATED IRON BEVERAGE.

ZOEDONE.

BRAIN AND NERVE TONIC AND NUTRIENT TONIC BEVERAGE.

ZOEDONE is not a medicine, but a beverage for daily use. It possesses properties combined in no other beverage, having the essential constituents of the BLOOD, BRAIN, and NERVE TISSUE. It is agreeable to the palate, pleasant to the eye, and innocent in its action. It is also non-alcoholic. As a dinner beverage it is unsurpassed as an agreeable sparkling drink; especially adapted for the overworked, worried, or anxious; for convalescents it is invaluable. It is recommended to the weak and to the strong as life-renewing and health-sustaining. The Faculty speak in the highest terms of it; and an award of Honourable Mention has been given to it at the Paris Exhibition, 1878.

PRICES (including Bottles), free on Rails at Wrexham:—6s. per dozen, in Half Champagne Bottles.

6d. EXTRA PER DOZ. FOR PACKAGES, not returnable. 1s. PER DOZ. EXTRA, specially prepared for shipment, and packed in casks.

"Among the products exhibited by R. Evans and Company, of Wrexham, is their Zoedone or Phosphated Beverage, which is an elegant palatable tonic drink containing the phosphates—lime, iron, soda, and potash"—*LANCET*.

ZOEDONE MAY SAFELY BE TAKEN DAILY—IN USUAL QUANTITIES AS OTHER BEVERAGES.

Dr. ED. A. KIRKEY, in his work on "*The Value of Phosphorus*," says:—"The therapeutic effects of Phosphorus are due to its ALIMENTARY properties, and when employed as a MEDICINE it is appropriated as a FOOD in building up and renovating nerve tissue. Phosphorus is a well-known constituent of the blood, and a never-failing ingredient in the more important tissues and fluids of the body. In common with Iron and Lime, it is a very important ALIMENTARY principle, and whenever its supply is not in proportion to the needs of the economy, deterioration of nervous tissue and nerve force is an inevitable consequence."

Opinions of the Press, and Dr. Hassall's Report.

"**ZOEDONE** is at once a food and a drink, having high value for sustentation and for restoration of the debilitated,"—*British and Foreign Confectioner*.

"**ZOEDONE** is no doubt a very efficient and pleasant vehicle for the administration of the but little soluble phosphate of iron."—*Lancet*.

Dr. WOOD says:—"As a nutrient tonic to the nervous system, and in all cases of nervous exhaustion, the use of Phosphorus is commended by reason and by experience."

"I have carefully examined a sample of the New Aerated Mineral Water, manufactured by Messrs. Evans & Co., and to which they have given the name of **ZOEDONE**. I find the statement made respecting its composition to be fully borne out by the analysis. The **ZOEDONE** is a BRIGHT, SPARKLING, and VERY PLEASANT beverage, quite free from any medicinal taste; indeed, it forms a most agreeable and elegant vehicle for the administration of the Phosphates of Lime and Iron which it contains, and which are in a state of complete solution."—ARTHUR HILL HASSALL, M.D., Author of "Food, its Adulterations and the Method of their Detection."

Patentee: D. JOHNSON, F.C.S. Manufacturers: RICHARD EVANS & CO., Wrexham, North Wales.

ALSO MANUFACTURERS OF ABSOLUTELY PURE AERATED MINERAL WATERS FOR HIGH-CLASS TRADE.
SPECIAL TERMS FOR CHEMISTS.

RICHARD EVANS & CO.'S NON-EFFERVESCING CONCENTRATED SOLUTION OF LITHIA & POTASS.

FOR THE USE OF THE MEDICAL FACULTY AND FOR DISPENSING CHEMISTS.

Each fluid ounce contains 10 grains Lithia Carbonate and 20 grains Potass Bi-carb.

A 20-ounce bottle of this Liquid Concentrated Lithia and Potass is equal in Medicinal value to three-and-a-half dozens of ordinary Aerated Lithia Water.

From the *Lancet*.—"NOTE ON THE PARIS EXHIBITION.—Among the pharmaceutical products shown by Messrs. R. Evans & Co., of Wrexham, is to be noticed their Concentrated Solution of Lithia and Potass, which is a good therapeutical improvement."

In 20-ounce Bottles, at 6s. each.

RICHARD EVANS & CO.'S AROMATIC GINGER ALE

Is non-alcoholic, and free from intoxicating properties. It is eminently stimulating and invigorating, pleasant to the eye, and agreeable to the taste. As a dinner beverage it promotes digestion. It is the safest beverage for the OVERHEATED, and is thus specially adapted for evening parties. It is recommended to be decanted (say two or three bottles at a time) into a glass jug, and its sparkling properties will then be improved when poured from the jug into the tumbler or champagne glass.

R. EVANS & CO.'S GINGER ALE may be safely taken by the young or the aged as daily beverage, and is equally adapted for a winter or summer drink.

R. EVANS & CO.'S GINGER ALE, and all their other beverages, are perfectly free from impurities, and are guaranteed free from LEAD and other injurious contaminations. The water from which these beverages are prepared is unsurpassed for purity, as shown by the analysis of several distinguished chemists.

Price 30s. per gross,

In which quantities (or assorted Mineral Waters) it is delivered carriage paid to any station, the empties being also returned at R. EVANS & CO.'S charge.

RICHARD EVANS & CO., Wrexham, North Wales.

A DESIDERATUM SUPPLIED!

Important Notice to
the Trade both at
Home and Abroad.

By the introduction of WENHAM'S LIME JUICE SALINE to the notice of their Customers (which from its unique and attractive appearance it itself effects when displayed upon the counter), Chemists have the opportunity of considerably augmenting their returns by the sale of this entirely novel and elegant preparation, which—to enumerate some of its advantages—

Possesses in a complete and portable form the valuable anti-scorbutic, alterative, and general healthful properties of Lime Juice and Potash;

Rendering it in the highest degree a remedy at once palatable, refreshing, and health-sustaining;

Which with a total absence of qualities whereby its range of usefulness can be limited, as in the case of purgative and obviously weakening Tartrates of Soda, &c.,

Supply important desiderata that, considered in connection with the unapproached intrinsic value of the article,

Amplify warrants the assumption of its obtaining the decided approval of the Public wherever introduced.

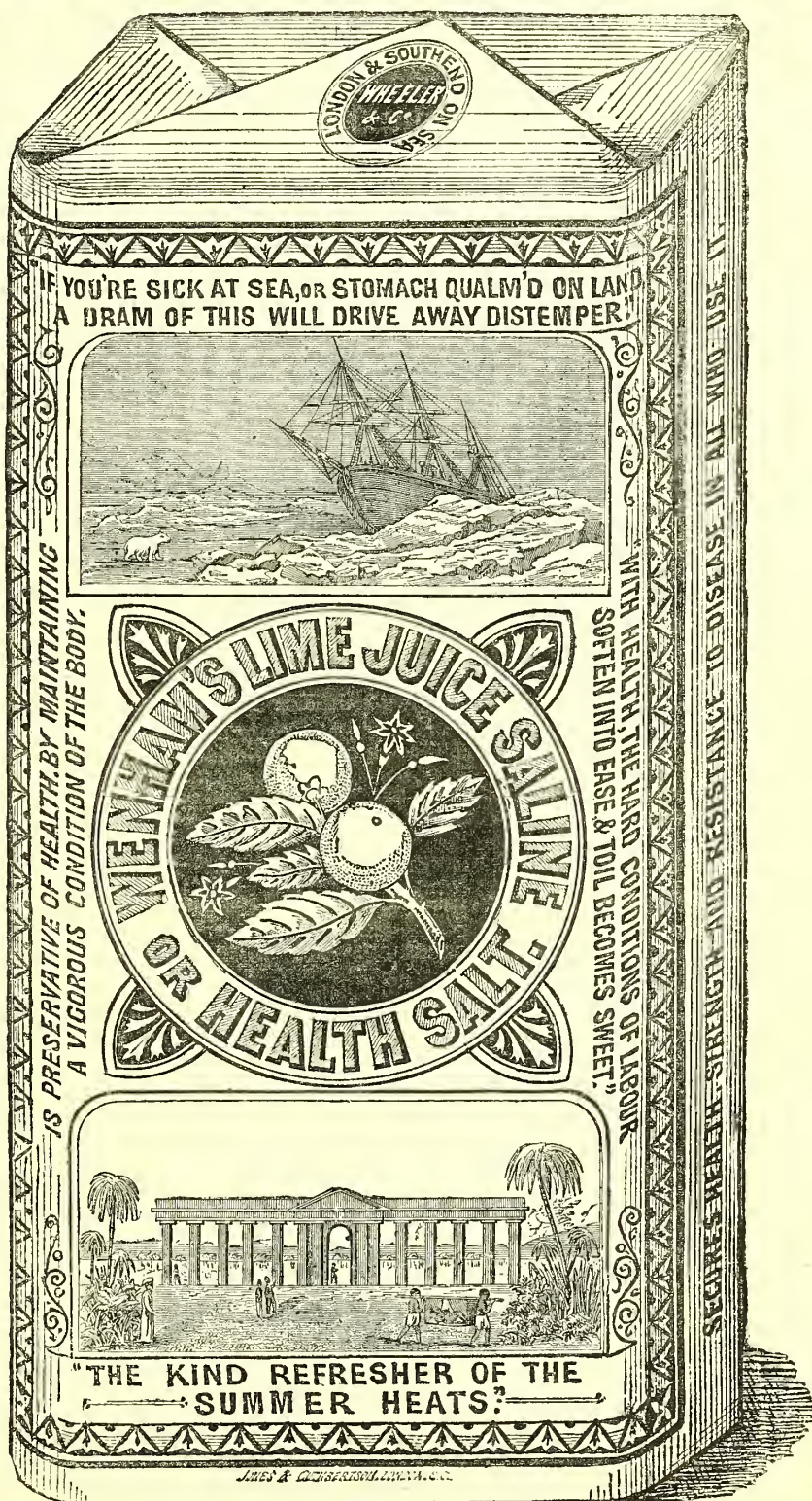
In Bottles, 2/6 and 4/6 each;
Cases for Export, 21/-

Sole Manufacturers (Registered),

WHEELER & CO.,
LONDON
AND
SOUTHEND-ON-SEA.

Kept by and may be ordered of the
following London Firms—

Messrs. Barclays; Edwards;
Maw, Son & Thompson;
Mather; Newberrys; and
Sutton.



SILICATED CARBON FILTERS.

DOMESTIC FILTER, NO. 27.



Made in cream-coloured Stoneware, fitted with the Silicated Carbon Media, complete with Cover and Silver-plated Tap.
All sizes of this pattern can now be had with Patent Ice Compartment, which renders this Filter the most perfect of Refrigerators.

| PRICES. | | With Ice Compartment. | |
|-----------------|---------------------|-----------------------|-------------|
| No. 0, capacity | $\frac{1}{2}$ gall. | .. 10s. 6d. | .. |
| No. A, " | 1 " | .. 14s. 6d. | .. 17s. 6d. |
| No. B, " | 2 " | .. 21s. 0d. | .. 25s. 0d. |
| No. C, " | 4 " | .. 32s. 0d. | .. 36s. 0d. |
| No. D, " | 6 " | .. 42s. 0d. | .. 48s. 0d. |
| No. E, " | 8 " | .. 52s. 0d. | .. 60s. 0d. |
| No. F, " | 12 " | .. 70s. 0d. | .. 80s. 0d. |

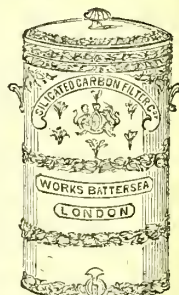
UNIQUE STONEWARE FILTER, NO. 28.

No House should be considered as thoroughly furnished until it is supplied with one or more good Filters.

No Water should be used for Drinking or Cooking without being Filtered.

This Filter is made of a New Ornamental Stoneware, similar in shape to the Domestic Filter, and of two-gallon capacity. When arranged in a Hall or Conservatory, side by side with evergreens, the effect is very pleasing.

Price, with Silver-plated Tap, 30s.



MAIN SUPPLY FILTER, NO. 40.

SPECIALLY ADAPTED FOR
Mansions, Schools, Hospitals, Public
Institutions, Breweries, Distilleries,
Soda Water Manufactories,
Dye Works,

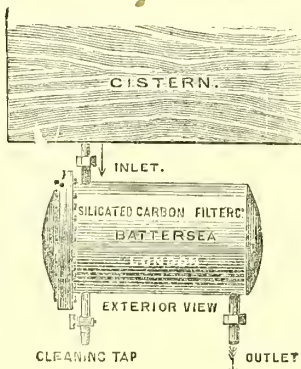
And all other Establishments where large quantities of

PURE WATER

Are required.

The ordinary Sizes kept in Stock are as follows:—

| | |
|--|----------|
| A, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch pipe | £6 6s. |
| B, 1-inch pipe | £9 9s. |
| C, $1\frac{1}{2}$ -inch, $1\frac{1}{4}$ -inch pipe | £15 15s. |
| D, 2-inch pipe | £26 5s. |



This Filter is extremely simple in construction, and can be either connected with a Cistern or attached to the Main Service Pipe. It requires no attention beyond an occasional opening of the Cleansing Tap, and will deliver a supply of purified water at a rate of 50 to 1,000 gallons per hour, according to size.

Special Contracts entered into
for Large Works, Institutions,
&c., &c.,

FOR PURIFYING THE WHOLE OF THE WATER SUPPLY OF A BUILDING BEFORE USE.

Ensuring Rapid and Perfect Filtration, at either High or Low Pressure.

FILTERS FOR SHIP'S CABIN USE, No. 26.



As supplied to the Admiralty, and used on board the first Steam Life-Ship "Peronelle."

Made in hard Stoneware, strongly cased in Wicker, and fitted with Silver-plated Tap.

| | $\frac{1}{2}$ -gallon capacity | .. | .. | .. | s. | d. |
|----|--------------------------------|----|----|----|----|----|
| 1 | " | " | " | " | 10 | 6 |
| 2 | " | " | " | " | 15 | 0 |
| 4 | " | " | " | " | 22 | 0 |
| 6 | " | " | " | " | 36 | 0 |
| 8 | " | " | " | " | 48 | 0 |
| 10 | " | " | " | " | 57 | 6 |
| | " | " | " | " | 68 | 0 |

These Filters are invaluable on board ship, furnishing a supply of pure and wholesome water during a long voyage.

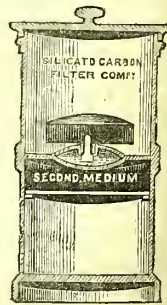
NEW DOUBLE-ACTION FILTER, No. 35.

In Cream-coloured Stoneware.

This Filter is specially adapted for rain water, and also for very hard or muddy water. The second medium being protected by a slab, no water can possibly reach it until after passing through the first medium. By this means a double process of filtration is effected, whilst at the same time the impurities contained in the water are deposited on the slab, and may be easily cleansed away with a sponge.

Prices complete—A, 2 gallons, 30s.;
B, 5 gallons, 50s.

Extra Blocks supplied for these Filters at 10s. 6d. and 15s. each.



REFRIGERATIVE CANVAS FILTERS, No. 32,

For hanging in Verandahs, Tents, or Huts, and also for travelling in hot climates. Prices—A, 21s.; B, 25s.

A LIBERAL DISCOUNT TO THE TRADE.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

PARIS: 131 Boulevard Sebastopol.

NEW YORK: 62 Water Street (H. R. Mensing, Agent).

SILICATED CARBON FILTERS.

SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be



No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

They are readily cleaned from sedimentary matter by merely blowing through the tube, and brushing the surface of the filtering medium.

- | | |
|---|-------|
| A.—Pocket Filter, $2\frac{1}{2}$ inches diameter, in porcelain, with glass mouthpiece, in decorated metal box | s. d. |
| B.—Ditto, $3\frac{1}{2}$ inches diameter, in best stoneware, with glass mouthpiece, in decorated metal box | 2 6 |
| Ditto, $3\frac{1}{2}$ inches diameter, in best stoneware, with silver-plated tap, in decorated metal box | 5 0 |
| C.—Emigrant's or Syphon Filter, 5 inches diameter, in best stoneware, with silver-plated tap, in enamelled metal box | 7 0 |
| Ditto, 5 inches diameter, in best stoneware, with silver-plated tap, in enamelled metal box | 12 0 |
| G.—Pocket Filter, for carrying over shoulder, as supplied to the Ashantee Expedition, to Col. Gordon, C.B., Commanding the Forces in Upper Egypt, to the Army of Roumania, and also to the Egyptian Forces in Abyssinia | 3 6 |

TABLE FILTER, NO. 24.

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.

Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.

POROUS TERRA COTTA FILTER, NO. 29.

Shape of this Filter as Fig. No. 24.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.

SILICATED CARBON BLOCKS.

2 in., 1s. 6d.; $2\frac{1}{2}$ in., 2s. 6d.; $2\frac{3}{4}$ in., 3s.; 3 in., 4s.; $4\frac{1}{4}$ in., 5s. 6d. ea.

SPECIAL QUOTATIONS FOR QUANTITIES.

PRIZE FILTER,

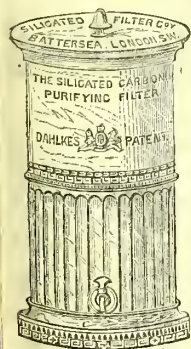
This Filter is constructed in the form and colour of an Etruscan Vase, having inside it a movable pan, into which the Silicated Carbon filtering medium is fitted.



PATTERN NO. 23.

The exterior is made of Porous Ware, which acts with remarkable power as a Refrigerator, keeping the water deliciously cool. Capacity, about Two Gallons.

PRICE, WITH SILVER-PLATED TAP, £3 10s.



DINING-ROOM FILTER, No. 22.

MADE IN MARBLED CHINA.

Size A holds about two gallons; size B, five gallons.

PRICES.

| | |
|---|-------|
| A | 35s. |
| B | 80s. |
| A, with Ice Compartment (New Patent.) | 42s. |
| B, with Ice Compartment (New Patent.) | 100s. |

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

REFRIGERATOR FILTER, NO. 25.

Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

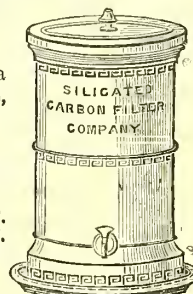
AFFORDING A

COOL DRAUGHT OF PURE WATER.

| | |
|--|----------|
| Price, with Silver-plated Tap | 31s. 6d. |
| Ditto, ditto, with Ice Compartment | 42s. 0d. |

Capacity, Two Gallons.

Specially adapted for Tropical Climates.



PORTABLE FILTER, No. 34, for Travellers at Hotels, Families at the Seaside, Pic-nics, &c. Made in Marbled Porcelain, with Cover. Can be placed in a jug, decanter, or other vessel. Price 7s. 6d. each.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

KEARSLEY'S WIDOW WELCH'S FEMALE PILLS.

These are universally acknowledged to be the Genuine, and Druggists may safely recommend them.

CAUTION.

The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incumbent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of Fleet Street, whose Widow found it necessary to make an Affidavit, for the protection of her property, in the year 1798. The Genuine Recipe for **Widow Welch's Female Pills** has been prepared by them for more than **Seventy Years!** Chemists are particularly requested to remark that, as a testimony of authenticity, each bill of directions contains an Affidavit, and bears the signature of "C. KEARSLEY" in writing, also engraved on the Government Stamp, and each Box is wrapped in **WHITE** paper.

1,000 Handbills, with Name, and Two Tin Showcards,

Supplied with all Orders for 1 dozen (13) Boxes.

Price 27s. doz., subject to 10 per cent. for cash.

Special Quotations to Shippers and for Large Quantities on application to

J. SANGER & SONS,
252 OXFORD STREET,
LONDON, W.

EPILEPTIC FITS.

**TAYLOR'S
ANTI-EPILEPTIC MEDICINE.**

NOTICE TO CHEMISTS.

Epilepsy being considered incurable by most medical men, we would call your special attention to this medicine, which has proved a cure in many cases, and in none failed to give relief. If, therefore, you know any one in your town who suffers, and will kindly interest yourself in the matter,

MESSRS. W. LAMBERT & CO.,
1a VERE STREET, LONDON, W.

Will forward you a **SAMPLE BOTTLE FREE** to any London House; and your future recommendations, when you have proved its efficacy, will be esteemed. A few descriptive handbills can be sent with it, for your distribution, if desired.

MARTIN'S SEWING MACHINE OIL,

For Cleaning and Oiling Sewing Machines,

Prepared expressly for Sewing Machines

It keeps them in good order and makes them work easy.

Will last longer than any other Oil, and does not dry or corrode.

A little of this upon the working parts will clear away the clogged oil and dirt caused by using common oils.

ALSO,

LAMBERT'S BICYCLE OIL,

Equally useful for Bicycles and Light Machinery.

Both are sold in Bottles, 6d. each; wholesale, 4s. Subject to usual discount.

Special Quotations to Shippers and Large Buyers.

LAMBERT & CO., 1a Vere St., Oxford St., W.

DR. SCOTT'S BILIOUS & LIVER PILLS,

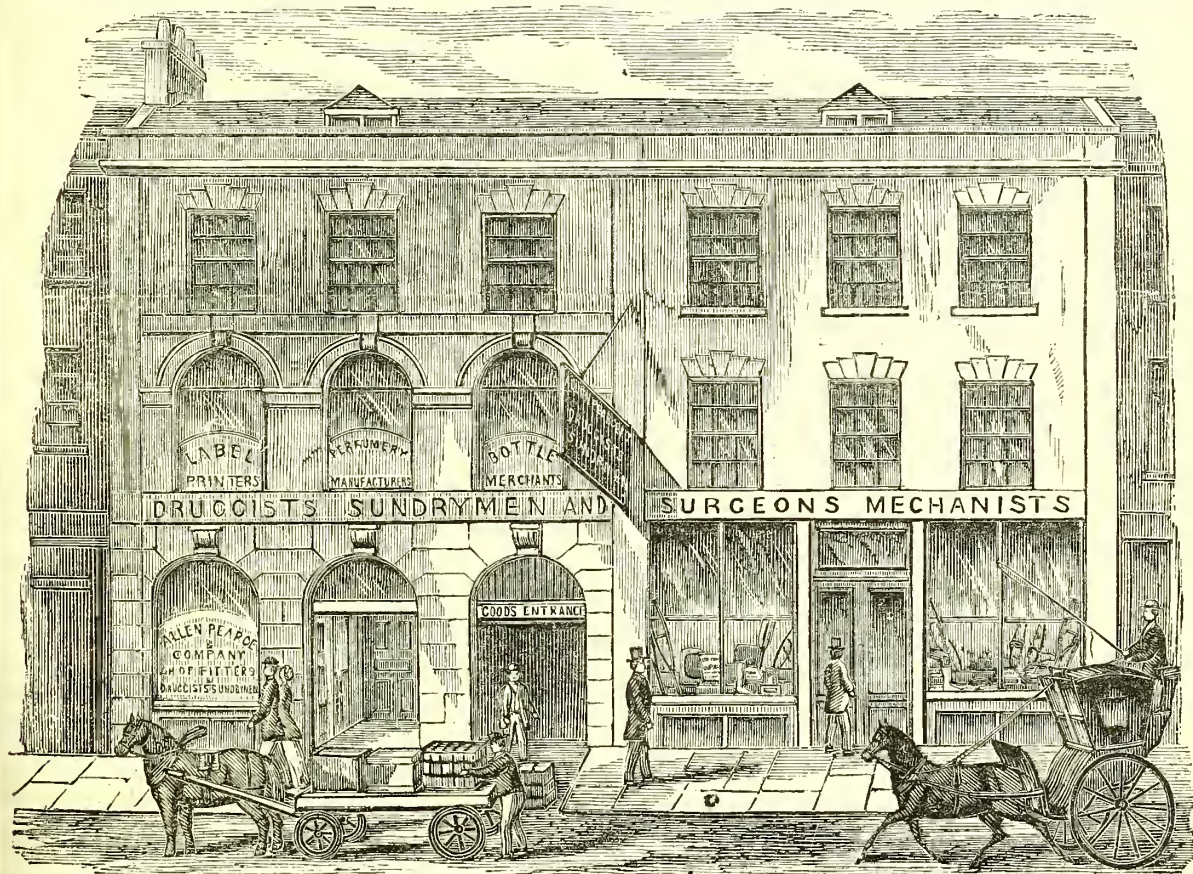
Which have been in use upwards of 70 years, are a medicine that can be safely recommended by all Medicine Vendors as a mild and effectual aperient for both sexes. They never cause griping. They are useful for all Bilious and Liver Complaints, Indigestion, Wind, Spasms, Foul Breath, Nervous Depression, Irritability, Lassitude, Loss of Appetite, Dyspepsia, Heartburn, Sour Eructations, Lowness of Spirits, &c.

Handbills, with Name and Address, can be had, either for counter use or house to house distribution, on application to the Proprietors,

MESSRS. W. LAMBERT & CO.,
1a VERE STREET, LONDON, W.

ALLEN PEARCE & CO.,

DRUGGISTS' SUNDRYMEN,
SURGEONS' MECHANISTS,
LABEL PRINTERS,
AND
EXPORT MANUFACTURING PERFUMERS,



10 & 11 BATH STREET,
BRISTOL.

**Enlarged Price List, ready January 1, 1879, sent
on receipt of Business Card.**

*Proprietors of Pike's Fit Powders, Lillie's Preparations, Schweitzer's Dandelion
Coffee and Cocoa, &c., Mrs. Allen's Neuralgic Mixture, &c.*

FOREIGN AGENTS WANTED.

EAU DE COLOGNE

OF THE MOST ANCIENT DISTILLER,

JOHANN MARIA FARINA,

Opposite the Jülichs Place, COLOGNE.

ESTABLISHED A.D. 1709.

PRIZE MEDALS:—LONDON, 1851 AND 1862; OPORTO, 1865; PARIS, 1867.

By appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain & Ireland; Their Royal Highnesses the Prince and Princess of Wales;

Their Majesties William, Emperor of Germany;



Albert II., King of Saxony; Alexander II., Emperor of Russia; Francis Joseph, Emperor of Austria; Lewis, King of Portugal; H.I.H. Frederick William, Prince Imperial of Germany.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark, for the protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 12s. 6d. per dozen, against my bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. 7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:—

MESSRS. J. & R. McCracken,

No. 38 Queen Street, Cannon Street, London, E.C.

The following are the sizes of my bottles:—

| | | | | | | |
|-------------------------------|--------|-----|-----|-----|------------|-----------------|
| No. 1. Long Green Flasks | ... | ... | ... | ... | 12 bottles | } to one dozen. |
| „ 2. Short White Bottles | ... | ... | ... | ... | 12 „ | |
| „ 3. Double ditto | as per | ... | ... | ... | 6 „ | |
| „ 4. Wickored Bottles (small) | figure | ... | ... | ... | 8 „ | |
| „ 5. ditto (medium) | plate | ... | ... | ... | 4 „ | |
| „ 6. ditto (large) | ... | ... | ... | ... | 2 „ | |

JOHANN MARIA FARINA,

Opposite the Jülichs Place.

JAHNCKE'S WAX-VESTAS

OF THE FINEST QUALITY,
IN NEW PATENT METAL BOXES,
UNIVERSALLY PATENTED.

The Greatest Invention in Box-Making of the Age.
Perfectly Round Corners in Square Boxes.

RETAILING AT ONE PENNY.

Orders through Wholesale Houses.

ERNST JAHNCKE,

Patentee,

33 ST. PAUL'S ROAD, CANONBURY, N.



W. H. BAILEY & SON, 16 OXFORD STREET, LONDON, MANUFACTURERS.



FIG. 1.

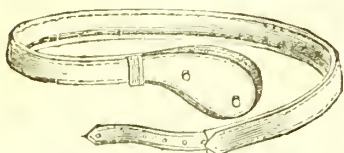


FIG. 4.

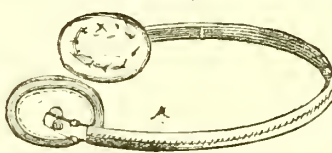
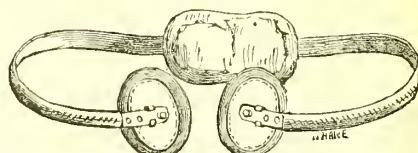


FIG. 5.



TRUSSES.

| | |
|--|-----------------|
| Circular Trusses, single, as Fig. 1, basil and chamois or basil and moleskin | per doz. £1 1 0 |
| Circular Trusses, double, basil and chamois or basil and moleskin | per doz. 1 14 0 |
| " " " with extending backs | " 2 14 0 |
| Salmon & Ody's Expired Patent, single, Fig. 4 | " 1 10 0 |
| " " " double, Fig. 5 | " 3 0 0 |
| Moc-Main Lever, single | each 0 8 0 |
| " " double | " 0 13 6 |
| Coles's Expired Patent, single | " 0 5 6 |
| " " double | " 0 10 6 |
| Scrotal Trusses, basil and chamois or moleskin, single | " 0 4 0 |
| " " " double | " 0 7 0 |

SUPERIOR TRUSSES.

| | |
|---|----------------|
| Circular Trusses, narrow springs, covered in basil and lined with red skiver, single | per doz. 1 7 0 |
| Ditto ditto | " 2 2 0 |
| Circular Trusses, covered in red roan and chamois, single | " 1 16 0 |
| " " " double | " 2 8 0 |
| " " narrow springs, covered in morocco and kid, best quality, beautifully finished, single | each 0 5 0 |
| Ditto ditto | " 0 7 6 |
| Salmon & Ody's Expired Patent, covered in roan, best polished springs, stitched with silk, single | each 0 4 0 |

| | |
|---|-------------|
| Salmon & Ody's Expired Patent, covered in roan, best polished springs, stitched with silk, double | each £0 8 0 |
| Moc-Main Lever Trusses, covered in calf or morocco, single | " 0 12 6 |
| " " double | " 0 17 0 |
| Scrotal Trusses, covered in morocco or calf and doe, single | " 0 10 0 |
| " " double | " 0 15 0 |

UMBILICAL TRUSSES.

| | |
|--|------------|
| UMBILICAL TRUSSES, plain, in basil | each 0 7 6 |
| " " " in red roan | " 0 10 6 |
| " " " on Salmon & Ody's principle, in basil | " 0 9 6 |
| " " " in cream roan | " 0 12 6 |
| Trusses for Prolapsus Ani et Uteri—Prolapsus Ani Truss | " 1 1 0 |
| " " Uteri | " 0 18 0 |

W. H. BAILEY & SON'S SPECIALITIES.

| | |
|--|------------|
| Improved Imperceptible Trusses, covered in morocco and silk, very strong and very light, entire weight under 3 ozs., single, each | 0 7 6 |
| Ditto ditto ditto double | 0 15 0 |
| Improved Imperceptible Circular Trusses, in morocco, with sliding heads, single | each 0 7 6 |
| Ditto ditto ditto double | " 0 15 0 |
| Improved Umbilical Truss, covered in morocco and silk. The pad is attached to the springs by hinges, which compensate for the movements of the body. It is the only Umbilical Truss that can be worn with perfect ease | each 1 5 0 |

The above may be obtained direct from the Manufacturers, or from their Wholesale and Export Agents, Messrs. Barclay & Sons, 95 Farringdon Street.

BY H.M.'S ROYAL



LETTERS PATENT.

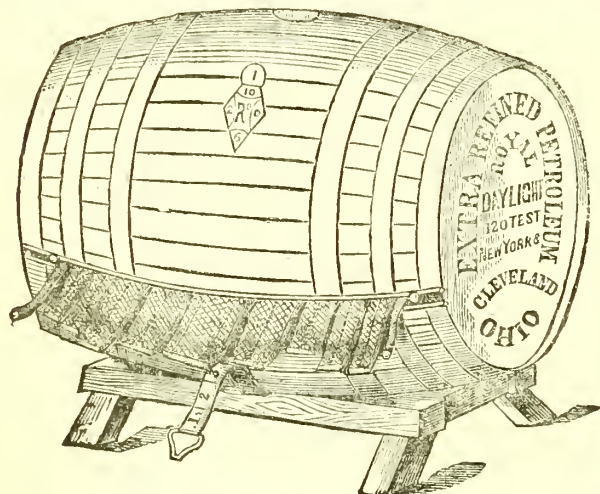
TUPHOLME'S PATENT SAFETY APPARATUS,

For Drawing off and Measuring Petroleum and other Inflammable Liquids.

THE PATENT MEASURE CAN BE STAMPED.

ILLUSTRATED PRICE LIST

POST FREE.



No. 5.—Tupholme's Registered Counter Lamp Wick Holder represents a barrel of Royal Daylight Petroleum, inside fitted for eleven rolls of lamp cotton, including every size. Attached is a strong tape measure which instantly springs back when not in use.

Size 10½ by 9½ in. Price 12s. 6d.

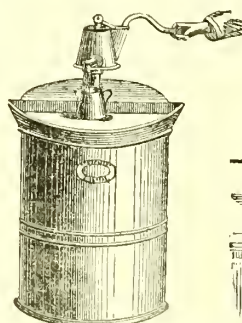


Fig. 6.—An improved Oil Cistern and Pump, suitable for any oils. The Pump lifts out; will go in bung-hole of barrel to fill cistern. Holds 40 gallons. Price, 37/6; if with 50 gallon tank, 5/ extra. Height, including pump, 43 in.; diameter, 23 in. Use-ful Oil Pump, 12/6.

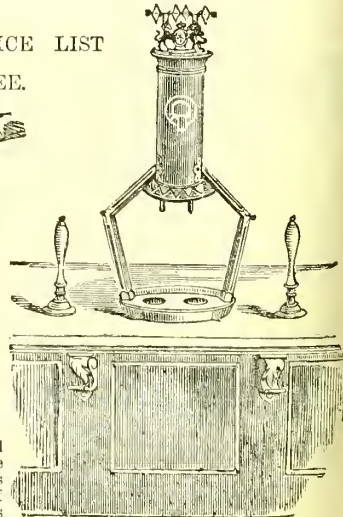
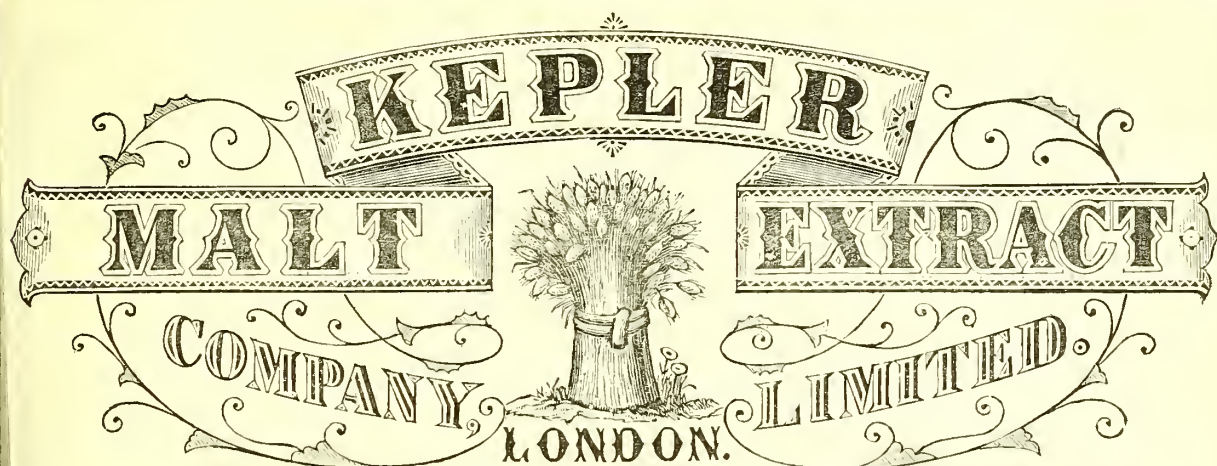


Fig. 3.—Measure fixed on Counter, which can be worked by force pump or beer pull, or the liquid be placed at an elevation. Single, 42/6; Double, 57/6. Height, 34 in.

148 INFIRMARY ROAD, SHEFFIELD.



IMPROVED MALT EXTRACT

(EXTRACTUM MALTI "KEPLER"),

Containing all the valuable Nutritive and Digestive Properties of the Best Malted Barley, Wheat, and Oats concentrated in vacuo.

FREE FROM ALCOHOL.

Possesses from FIVE to TEN times more value than any Alcoholic or Fermented Extract of Malt.

From "ZIEMSEN'S CYCLOPÆDIA OF MEDICINE."

"During the last few years MALT EXTRACT has almost entirely taken the place of COD LIVER OIL in the treatment of phthisis and other wasting diseases at the BASLE HOSPITAL, and we have as yet found no reason for returning to the use of the latter remedy."

TRADE



MARK.

COD LIVER OIL WITH MALT EXTRACT

(OL. MORRHUÆ C. EXT. MALTI "KEPLER").

The most Palatable, Easily Digested, and Permanent Combination of Finest Norwegian Cod Liver Oil, with Concentrated Extract of Malted

BARLEY, WHEAT, AND OATS.

COD LIVER OIL is admitted to be the best nutritive remedy in wasting diseases, but to many persons it has a disagreeable flavour and after-taste, and is so rich, that when administered alone it is frequently found to derange the digestion, especially in delicate subjects.

By combining the two, the valuable properties of both substances are secured, the excess of fatty matter is reduced to an easily digestible proportion, and the compound is exceedingly palatable, and leaves no after-taste.

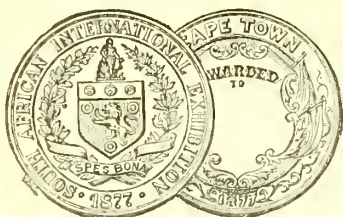
The "KEPLER" Cod Liver Oil with Malt Extract, and the "KEPLER" Concentrated Malt Extract, are non-alcoholic, and are prepared by new and improved processes under the superintendence of a Chemist of twenty years' experience in the preparation of Malt Extract.

Put up in 12 oz. and 24 oz. (Avoir.) Bottles, and dispensed at 2s. 9d. and 4s. 6d. In 5 lb. Bottles for Hospitals and Surgeons.

SUPPLIED TO CHEMISTS ON VERY ADVANTAGEOUS TERMS.

THE "KEPLER" MALT EXTRACT CO., LIMITED,
8 SNOW HILL, HOLBORN VIADUCT, LONDON, E.C.

Prompt attention to Correspondence. Complete Lists and Prospectus on application.

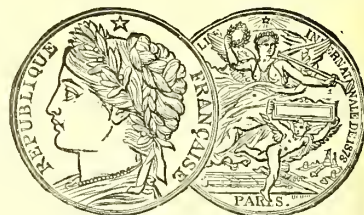


PRIZE MEDALS

AWARDED TO THE

"A 1" COD LIVER OIL.

The A 1 Oil, unlike other samples, contains only a small amount of indigestible matter (solid fats), and a larger proportion of the special constituents of Cod Liver Oil, as is shown by the Table below, which gives the chemical composition, as demonstrated by analysis, of the kinds most frequently sold:—



| | Oleic Acid. | Cetyl and Stearic Acids. | Volatile Acids, Glycerine, Iodine, Bromine, Phosphorus, &c. |
|--------------------------|-------------|--------------------------|---|
| Pale Oil | 83.4 | 12.6 | 4.0 |
| Newfoundland Oil | 83.6 | 13.2 | 3.2 |
| A 1 Oil | 86.3 | 9.1 | 4.6 |
| Pale Brown Oil | 85.0 | 11.3 | 3.7 |
| Ditto (reddish) | 81.5 | 11.7 | 3.8 |

9s. per Gallon in Winchester Quarts; 8s. 9d. per Gallon by the 25-Gallon Cask.

S. B. & D. supply samples and Circulars Free of Charge to the Trade for Medical Distribution, also Retail Circulars with name and Address of Customers

SOUTHALL BROS. & BARCLAY, Manufacturing Chemists, Birmingham.

DRAPER'S INK (DICHROIC)

THE NEW BLACK INK, different from anything else ever produced.

Writing becomes a pleasure when this Ink is used. It has been adopted by the principal Banks, Public Offices, and Railway Companies throughout Ireland.

It writes almost instantly full black.

Does not corrode Steel Pens.

Dries rapidly on the Paper.

Is cleanly to use, and not liable to blot.

Flows easily from the Pen.

Blotting-paper may be applied at the moment of writing.

In Jars, 6d., 1s., and 2s. each.

Can be obtained, in London, through Messrs. BARCLAY and SONS, Farringdon Street; W. EDWARDS & SON, 157 Queen Victoria Street, London, E.C.; F. NEWBERRY and SON, Newgate Street; S. MAW, SON, and THOMPSON, Aldersgate Street; JONES and CO., 98 Southwark Street; WM. MATHER, London and Manchester; and AYRTON and SAUNDERS, Duke Street, Liverpool.

BEWLEY & DRAPER, Limited, DUBLIN.

See "CHEMIST AND DRUGGIST," December 15th, 1874.

SAVORY & MOORE'S SPECIALITIES.

PHOSPHORISED COD LIVER OIL.

The advantage of this preparation over the imitations of it consists in the ability to administer a SUFFICIENT dose of Phosphorus without the admixture of a LARGE quantity of Cod Liver Oil.

Bottles, Retail, 1/6, 2/6, 4/6, 8/-. Wholesale, 12/-, 20/-, 36/-, 70/- doz.

PHOSPHORUS PILLS, 1-32nd of a grain, or any other strength required, non-resinous and perfectly soluble. Bottles, Retail, 4/6, 6/6. Wholesale, 36/-, 54/- doz.

THE FINEST COD LIVER OIL, prepared from the fresh Livers, and possessing the constituents of the Oil in their purest and most palatable state. See Pereira's "Elements of Materia Medica."

IN CAPSULED BOTTLES.

Retail, 2/6, 4/6, 8/-. Wholesale, 18/-, 30/-, 60/- doz.

PANCREATIC EMULSION, or Medicinal Food, for use in Consumption, Wasting Diseases, &c.

Retail, Bottles, 2/6, 4/6, 8/-. Wholesale, 21/-, 40/-, 70/- doz.

PANCREATISED COD LIVER OIL. In combining the Pancreatic Juice with the Oil, the digestion of the latter is easily and rapidly effected.

Retail, Bottles, 2/-, 3/6, 6/-, 11/-. Wholesale, 18/-, 30/-, 54/-, 96/- doz.

PANCREATINE (Powder or Granules) represents the active principle of the Pancreatic Juice, by which fats and oils are digested and assimilated.

Retail, Bottles, 2/-, 3/6, 6/6, 12/6, 21/-. Wholesale, 18/-, 30/-, 60/-, 108/-, 180/- doz.

PANCREATINE WINE. Retail, Bottles, 3/-, 5/-, 10/-. Wholesale, 24/-, 40/-, 72/- doz.

PEPSINE PORCI. Retail, Bottles, 2/-, 3/6, 6/6, 12/6, 21/-. Wholesale, 18/-, 30/-, 60/-, 108/-, 180/- doz. In bulk, 6/- per oz.

PEPSINE WINE. Retail, 3/-, 5/-, 10/-. Wholesale, 24/-, 40/-, 72/- doz. In bulk, 5/- per lb.

PEPTODYN, A combination of the whole of the digestive secretions, forming an invaluable remedy in the treatment of all forms of Dyspepsia, and all diseases arising from imperfect nutrition.

Retail, Bottles, 2/9, 4/6, 11/-. Wholesale, 24/-, 40/-, 96/- doz.

SAVORY & MOORE, 143 New Bond Street, LONDON,

And all Chemists throughout the World.



COLONIAL BUILDINGS, 44A CANNON STREET, LONDON, E.C.
Published on the 15th of each Month.

TWENTY-FIRST YEAR OF PUBLICATION.

Subscription, 10s. per year, payable in advance;
commencing from any date.

Post free to every country in the world. Single Copies, 1s. each.

Literary Contents.

| PAGE | PAGE |
|---|--------------------------------------|
| Pharmaceutical Council..... 49 | Eno's Fruit Salt: Legal Action .. 62 |
| Month..... 47 | Milk of Sulphur Prosecution .. 63 |
| Pharmacalia..... 48 | Holloway's Pills .. 64 |
| Drugs Produced by Drugs in .. 65 | Bankruptcies and Liquidations .. 65 |
| Daily Use..... 50 | Gazette..... 67 |
| Chemists' Assistants' Association .. 49 | Editorial Notes:— |
| American Quinine: Daniel C. .. 51 | Co-operative Trading..... 68 |
| Robbins..... 51 | Bankruptcy Legislation..... 70 |
| How Plants Feed: C. E. Stuart .. 53 | Reciprocity .. 70 |
| Provincial Reports..... 55 | Analysm..... 71 |
| Formule of Secret Medicines .. 58 | Reviews and Literary Notes..... 72 |
| Notes from Greece: Orange- .. 59 | Correspondence .. 75 |
| flower Water, &c..... 59 | Pharmaceutical Chemistry .. 76 |
| Chemical Society..... 59 | Trade Notes..... 78 |
| ium: Fluctuations during .. 60 | Trade Changes..... 80 |
| Twenty Years..... 60 | Patents..... 80 |
| Abandonment of the Shepperley .. 60 | Exchange Column .. 82 |
| Case..... 60 | Druggists' Sundries..... 84 |
| Foreign Items..... 60 | Trade Report .. 84 |
| | Notes and Queries .. 88 |



The plaintiffs' solicitors in the case of Apothecaries' Society v. Shepperley have given formal notice to the defendant that they will abandon their appeal in that case.

Co-operative stores and retail traders have occupied a good deal of public attention during the past month. The new City Supply Stores have been severely condemned by some influential dignitaries of the Church. The Army and Navy Stores have tried to prevent a new company from using the title, "The Junior Army and Navy Stores," but the Master of the Rolls dismissed their application rather contemptuously. If they professed not to deal with the public prominently, they had no reason to assert that any harm could be done to them. Besides, they had no exclusive right to the term "Army and Navy."

The Pharmaceutical Council has "unanimously" agreed to retain recommendations which are intended to improve the Pharmacy Act; but these are at present kept secret. It is probable that a Bill will be drafted, and if possible passed during the Parliamentary session just opened. It is a pity that unanimity could not have been secured before. The chance of passing a Bill not introduced before April—and there is not much chance of this one getting into shape till then—is tolerably remote: at any rate, if the Bill is to have any serious effect.

Early 5,000 persons had been conditionally registered under the Dentists Act by the end of 1878. The *British Medical Journal* has asserted that these will be exempt from jury service. This statement, we believe, is incorrect. All "registered medical practitioners" are exempt, but section

27 of the Dentists Act provides that "a certificate under this Act shall not confer any right or title to be registered under the Medical Act, 1858."

The Board of Trade has announced in a letter to the Peterborough magistrates that half-hundred and hundred weights must bear not only the figures 56 and 112, but also the sign "lb." or the word "pounds." Old weights without these cannot be used.

We are able to publish an important paper by Mr. Robbins, of New York, of the firm of McKesson & Robbins, on Quinine. Some experiments referred to by Mr. Robbins show that English-made quinine can pay the 20 per cent. Customs duty on entering the United States, and can then compete successfully with the native product. Samples of English and American unbleached, bought at the same price, were tested, and the English stood the trial better than the American specimens.

Diagrams are presented, on pages 60 and 61, showing the course of the opium market during the past 20 years, the monthly fluctuations being indicated.

An attempt to revive the prosecution of chemists for selling as milk of sulphur the article containing lime has been made at Guildford by Mr. Angell, the borough analyst. The magistrates dismissed the case. A grocer and a chemist were, however, fined for selling sublimed sulphur for milk of sulphur.

The Chemists' Assistants' Association celebrated its first year of existence by a dinner, at the Holborn Restaurant, on January 29, when about 70 sat down, including several gentlemen of eminence in the pharmaceutical world.

The centenary of the birth of Sir Humphry Davy, the eminent chemist, was commemorated at Penzance on February 13 and 14. The chief features were an exhibition of scientific apparatus, &c., mainly from South Kensington, at St. John's Hall and the Public Buildings, and a series of lectures on scientific subjects.

Mr. Holloway has advertised in some South American papers advertisements stating that a Mr. Samper, of Bogotá, Colombia, was importing spurious imitations of his pills and ointment from America. Mr. Samper declares he has not done so, and brought an action against Mr. Holloway to compel him to stop, or at least to alter, the advertisements. This was agreed to. It was stated by Mr. Holloway's counsel that profits of 50,000% a year are made by him, 40,000% of which are spent in advertising.

Mr. Fairlie, of Glasgow, who has taken a prominent part in pharmaceutical politics, serving both on the Executive Committee of the Trade Association and on the Council of the Pharmaceutical Society, suddenly disappeared last week. His assets are considerably less than his liabilities.

Mr. Eno has again established his claim to the title "Fruit Salt," or any term of a similar character, and has restrained Mr. Stephens, a chemist of Hereford, from registering as a trade-mark a design somewhat resembling his own.

Mr. Beatson, chemical manufacturer, of Sheffield, has been sentenced to 18 months' imprisonment, with hard labour, for inducing a Mr. Mycock to invest 5,000% in his business on false representations.

A chemist's apprentice at Nottingham left his master when he came of age, as he was legally entitled to do, but his indentures did not expire for another year. The master summoned the father and the apprentice for the value of the youth's services, and he obtained 15%.

Pharmacalia.

DISCUSSION ON WATER ANALYSIS.

A VERY crowded assembly at the rooms of the Chemical Society in Burlington House bore witness to the interest felt in the discussion of Dr. Tidy's recent paper on "Water Analysis." The meeting was held on Thursday night, February 6, Dr. Gladstone being in the chair. Previous to the debate a number of names of candidates for admission to fellowship were duly read out, and the long row of ballot boxes, each surmounted by the certificate of the applicant, were arranged in a continuous line across the lecture table. The whole of the candidates were elected, forming a striking contrast to the unpleasantness of feeling which once unhappily prevailed. Dr. Frankland, in the absence of Mr. Riley, opened the discussion, and while bearing testimony to the value and laborious character of the researches of Dr. Tidy, yet observed that there were certain details fairly open to criticism. Professor Wanklyn would not enter upon any strictures on the paper itself, but would rather give his views on the general question of water analysis. In doing so he commented on the far greater accuracy obtained by the albuminoid ammonia process adopted by himself and others, and those which in his opinion could be got by the method pursued by Dr. Frankland. Several speakers followed, chiefly insisting on the importance of absolute purity in the reagents employed in the analysis of potable water. It was objected to Dr. Tidy that he had not specified in his experiments a standardised permanganate, though this could easily be effected by means of oxalic acid; that he had laid too great stress upon colour as a test of purity, and specially that he had been needlessly alarmed about the loss of solid particles during the ordinary process of evaporation. At a very late hour indeed Dr. Tidy rose to reply, and though he seemed personally aggrieved with certain remarks that had been made, his answer, brief though it was, proved remarkably effective. He was glad that he had been the means of exciting so animated a discussion on an important branch of analysis. Some suggestions offered that night were most useful, and they clearly pointed out difficulties which would want consideration, and could not be answered off-hand. With regard to colour testing he had been misunderstood. He used it only as an adjunct, as a serviceable general indication, and by no means as a conclusive test. With regard to the danger of loss of solid particles, caused by the evaporation of a liquid, his opinion was as strong as ever. He had originally alluded to lead, and had asked the question, How could the solid particles of lead be conveyed from a painted wall so as to cause disease, but upon the theory that they were disengaged by evaporation? Instances of the same kind might be enumerated, and he might as fairly theorise that these particles were so disengaged, though the eye could not appreciate the separation, as that Dr. Frankland should attribute the unhealthiness of waters to germs, which as such could not be demonstrated by the microscope. Dr. Frankland had remarked upon the classification of waters, and that they might be arranged into convenient divisions according to a fixed standard of purity or impurity. He (Dr. Frankland) was disposed to make some alterations in the classification that had been suggested. Dr. Tidy was sure that on this point they would be agreed, that while, as a matter of convenience, a classification might be advocated, any hard and fast line in this direction was to be deprecated.

Dr. Phipson, in a note to the *Chemical News*, has well expressed the same idea, at the same time congratulating Dr. Tidy on the good service he has done in drawing atten-

tion to the most accurate methods to be adopted in water analysis. "For many years past our text-books, both English and foreign, have stated that when the total impurities of a sample of water reach beyond a certain figure the water is to be condemned. The fact is, we possess at present no positive data whereby to condemn a sample of drinking water, and cannot possess such data until physiological experiments have been made to prove when and why a given kind of water is bad or good. In most cases it is not difficult to prove a water good for drinking, but quite the reverse to establish that it is injurious to health, or unwholesome, unless it be very bad indeed." Dr. Tidy's original paper, entitled, "The Processes for Determining the Organic Purity of Potable Waters," is published in full in the January number of the *Chemical Journal*.

* *

RED AND WHITE WINES.

Some time ago we were engaged in translating and summarising an elaborate French report on the consumption and comparative effects of red and white wines. The matter was not of sufficient pharmaceutical interest to warrant reproduction except as regards one point, which has always seemed a mystery. Universal experience proves that white wines are decidedly more deleterious than the red variety—this assertion is confirmed abundantly by statistics and from a mass of private information obtained from wine-producing countries. Having trespassed considerably upon the kindness of correspondents relative to this matter, we have received but one reply, in the shape of the strongest support of the opinion that white wines were to be used with the greatest degree of caution. The subject has been revived in the *Spectator*, and a reason has been given for the difference in effect which can be appreciated by our readers. Red wines are rich in tannin: white wines are not; the natural inference being that the astringent principle present forms a counteraction to the stimulating influence of the alcohol contained.

* *

BOTANY IN ITALY.

The communication of Mr. Thomas Hanbury which dates from Mortold, near Mentone, is sufficient to drive an English botanist to the verge of desperation. The beautiful garden which is his property has fortunately escaped too much drought and excess of sunshine. We have not as a rule been troubled with a too abundant continuance of the latter, and, indeed, have had reason to be sceptical concerning that decimal fraction of the sun's rays with which we are credited in official meteorological reports. The Italian soil having been visited with a greater amount of rain than usual, a beneficial influence has resulted, so that on January 1, 1879, no less than 160 plants, and of some many varieties, were growing and in flower, in the open air in the grounds of the Palazzo Orengo. On December 12 the country down to the seashore was covered with snow; the temperature showed two or three degrees of frost, but no plant could be discovered which had been killed by the cold.

Mr. Hanbury gives for the first time in print an amusing though most vexatious occurrence, which happened to a friend, a zealous botanical collector. Arriving at the Custom-house, on the frontier, many specimens of plants collected and dried in the South of France "were taken out of the pressing paper, pounded up to powder, and then burnt. His intense disgust was not lessened the next day by observing that the Custom-house officers allowed a much larger lot of dried plants, to wit, a load of hay for horses, to pass from France to Italy without comment." It would

have been well if the authorities had acted upon the motto of Talleyrand, *Pas trop de zèle*. These wonderful precautions were taken with a view of preventing the arrival of that dreaded wine-pest, Phylloxera. It may be a private consolation to the disappointed botanist to feel that his plants would have been in good preservation had he been allowed to retain them in his possession. In the month of November last we received a promised collection of plants, mosses, ferns, and creepers, which are luxuriant in a certain district in Burmah. They had not been properly pressed and dried, and hence arrived at their destination as a heap of decayed vegetation. Bad preparation may be placed on a par with the most destructive official superintendence.

The Pharmaceutical Council.

THE February meeting was held on the 5th inst., when 17 members were present. Messrs. Betty, Fairlie, Hanbury, and Rimmington were absent.

THE FORTHCOMING ELECTION.

The lot was taken for the seven members of Council who should retire in May next, and the following names were drawn:—

| | | |
|--------|---------|----------|
| Atkins | Hampson | Williams |
| Betty | Savage | Woolley |
| Frazer | | |

The following, who remained in by lot last year, now retire by rotation:—

| | | |
|-----------|------------|---------|
| Bottle | Hanbury | Robbins |
| Churchill | Rimmington | Shaw |
| Cracknell | | |

The following remain in office for another year:—

| | | |
|----------|--------|----------|
| Fairlie | Hills | Sandford |
| Gostling | Mackay | Schacht |
| Greenish | | |

THE NUMBER OF MEMBERS.

The Registrar's report was presented, showing that the total number of names on the register was 13,309 for this year, or 11 less than last year. The number of members of the Society was, in all, 35 less than last year; "associates not in business" were fewer by 24; "apprentices" were 14 to the debit. On the other side was down an accession of strength in the "associates in business," that is, those who pass the Minor Examination and in the Society. These, after deducting deaths, secessions, &c., show a gain of 85 to the Society, the net result being a gain of 12 in the Society's strength. The President remarked that not nearly all those who passed the Minor Examination joined the Society, and it was a question whether the inducement offered, of being an associate only, was sufficient.

AN OPPORTUNITY FOR BENEVOLENCE.

In the report of the Committee of this fund a case was mentioned towards which the Committee had voted 50*l.*, for which further assistance was much needed. The father, who had been in business many years, and as an associate and member connected with the Society for many years until the time of his death, died last Christmas Day absolutely insolvent, leaving four children without mother or relations of any kind upon whom they could depend for support. Kind neighbours took the children in to give them temporary shelter until some provision could be made for their future maintenance. The youngest child had since been adopted by a benevolent chemist in the neighbourhood; the eldest was a little girl of 11, very intelligent, so rich so, in fact, that for some time during her father's last illness she had acted as a kind of assistant, and served in the shop. There was some idea of sending her to an asylum in Bristol, but it was thought by those who took an interest in the case that it would be a pity to do so if it could be avoided. A Mr. Bourdon had taken the eldest boy, and might keep him if some assistance were given him. The next boy was at present in a temporary place of refuge, and

some permanent home must be found for him. It was suggested that 15*l.* should be given to each of the first three, and 5*l.* to the youngest one, and the Council was reminded that unless friends came forward in some special way to provide for these children a large sum would be required for them in future. Several members spoke of the genuineness of this case, and Mr. Robbins mentioned that what was especially desired in publishing the case was to find some one who would take the third little boy with or without a premium.

LADY STUDENTS.

Professor Attfield reported that two ladies were now among his pupils in the laboratory, and that no inconvenience resulted.

VOTES OF THANKS

Were passed to Professor Redwood for his able lectures on the Electric Light, which the President said were the most instructive lectures he had heard on the subject, and to the reporters on the Paris Exhibition, who had performed their duties in a very able and interesting way.

THE PERFIDIOUS JOURNAL.

Mr. Hampson commented on the spirit shown by the editor of the Journal in omitting to notice prominently the abandonment of the appeal in the Shepperley case. Several other members of the Council supported Mr. Hampson, but the President saw nothing to complain of.

PHARMACY ACT AMENDMENT.

A long discussion took place on the report which had been prepared by the Committee appointed to investigate the Pharmacy Act with a view to its amendment, but this discussion took place in secret. The report and recommendations as amended were unanimously adopted, and Mr. Hampson gave notice that he would move for the appointment of a committee to draft a Bill and carry it through Parliament if possible.

Chemists' Assistants' Association.

ON Wednesday, January 8, Mr. Parker read a paper on "Pyrogenous Products," before the above Association, at its rooms, 32A George Street, Hanover Square. The author defined the pyrogenous products of his paper as the substances produced by the destructive distillation of wood, coal, bone, horn, and organic acids and bases. From this will be seen the wide ground travelled over, the subject being treated throughout in a very clear, complete, and interesting manner. Specially alluded to were the various wood and coal tars, phenol, creasote, aniline, &c. It was stated as worthy of more general notice that phenol in creasote may be easily and certainly detected by the addition of bromine-water, which causes a precipitate of tri-bromophenol.

A discussion having followed, a vote of thanks was unanimously passed to the author for his elaborate paper.

On January 22 Mr. J. McKnight read a paper on the "Past and Present Condition of Chemists' Assistants." Glancing hastily at the past, Mr. McKnight considered whether, in hours of business, social and financial position, chemists' assistants could compare favourably with other professions and trades, seeing the present bettered condition of many trades. On all these points Mr. McKnight was rather despondent.

Several members supported the author of the paper; others, however, including a gentleman from France, challenged his views. Ultimately the discussion, which was conducted throughout with moderation and fairness, was adjourned to February 5.

The Association is certainly to be congratulated on the success of its first annual dinner, which was held in the Prince's Saloon of the Holborn Restaurant, on Wednesday, January 29, at 8.30 p.m. Mr. J. E. Stuart (Dinneford & Co.) was in the chair. More than 70 sat down, and the evening was very enjoyable. Among the visitors were Professors Bentley and Redwood, Drs. Muter and Stocker, Messrs. Moss, Postans, and Wills, &c., &c. Dr. H. Dobell and Mr. A.

Bishop, who were unable to be present, were respectively represented by checks of 1*l.* and 3*l.* 3*s.* The proposers and responders to the toasts in most cases did their work gracefully, and the songs and recitations were many of them above the average. The following is the programme:—Toast, "The Queen and Royal Family," by J. E. Stuart, Esq.; National Anthem; "The Medical Profession," proposed by Mr. E. Marshall, responded to by Dr. Stocker; pianoforte solo, by Mr. F. W. Branson; song, "The Warrior Bold," Mr. E. S. Bull; "The Pharmaceutical Society," proposed by Mr. O. Wallis, responded to by Professor Redwood; recitation, "Our Eye-witness on the Ice," Mr. C. E. Stuart; "The Chemists' Assistants' Association," proposed by the chairman, Mr. J. E. Stuart, responded to by the president, Mr. O. Wallis; song, "The Village Blacksmith," by Mr. F. G. Curtis; "The Pharmaceutical Press," proposed by Mr. W. S. Branson, responded to by the representative of THE CHEMIST AND DRUGGIST; comic song (encored), by Mr. L. Tompsett; "The Visitors," proposed by Mr. C. E. Stuart, responded to by Mr. Moss; pianoforte duet, "The Gipsy Quadrilles," Messrs. Branson and Tompsett; "The Chairman," proposed by Mr. E. S. Bull.

RASHES PRODUCED BY DRUGS IN DAILY USE.

THERE are certain well-known and constantly-used drugs which give rise to cutaneous eruptions, which are very alarming to patients and puzzling to those administering the offending agent; unless they are quite prepared for such a result; hence it is of the greatest importance that all who have to do with the administration of medicine should be able to recognise such rashes, and so allay at once all anxiety.

To classify somewhat we must place these remedies under two categories:—1. Those which produce their effects by internal administration; 2. Those which give rise to irritation by outward application. In the former we place arsenic, iodine, iodide of potassium, bromide of potassium, belladonna, hyoscyamus, copaiba, chloral. Under the second heading we group iodide of starch, arnica, sulphur, chrysophanic acid, and eroton oil. Tar comes under both headings, for if given internally, it not only causes great irritation of skin, but other and apparently more alarming general symptoms, and used too frequently externally it gives rise to acne: Neumann found that in tar manufactories the workmen suffered from this form of disease owing to the local action of the tar vapour.

It must not be for a moment supposed that these drugs will always produce such effects whenever and to whomsoever given, for as a matter of fact there are all grades of liability—some, no matter how large the dose, never suffer at all; others again can take a moderate dose without any bad result; others again are susceptible to the smallest dose, and so much is this the case that such persons cannot take the offending drug in any shape at all.

We will commence with chloral. This drug has been and still is so largely used that it is well to be aware of the fact that it may produce redness of conjunctivæ and also of face (erythema). Dr. Oscar Liebreich seems to refer such a result to impurities. In the case he mentions he demonstrated that the symptoms mentioned were due to admixture of chlorine.

Copaiba comes next and produces a most puzzling rash, sometimes covering the whole body, and giving rise to a suspicion of measles, but there is no rise in temperature, no running at eyes and nose, no crescentic outline of rash, general health not affected. There is usually much itching, and the eruption resembles that of nettle-rash, but without any wheals, and then of course there is the fact that the patient has been taking the drug, and most probably a still further history of gonorrhœa. Dr. Tilbury Fox mentions that he has seen one part of the rash like measles and another like scarlatina, but this condition was an early one.

Henbane, in the form of leaves, taken by mistake has given rise to a red rash like scarlatina, but this is a single case, and the same has not been recorded of any of the official preparations, so that in any doubtful case it would be enough to discover that henbane had been administered.

Belladonna produces a rash like that of scarlet fever, with even fever and dry throat, and thus, on the principle *similia similibus curantur*, has secured an important place in the homœopathic pharmacopœia as a certain cure for scarlet fever. There will, in such cases, be dilated pupils, absence of severe or well-marked mischief about throat, and generally no history of exposure to infection, and mostly occurring in adults under treatment for some other disease.

Arsenic, like tar, really belongs to both categories, for when handled, as in artificial flower-making, it causes excoriations of the hands, and when used as a dye in socks, gloves, or any article worn next the skin, it is apt to cause eczema. In these cases the occupation of the affected one, or the fact of wearing any article with brilliant green tint, would prevent mistakes. Given internally it may cause redness of skin or even eczema, although this last is rare. It has been said also to induce an attack of shingles, but this seems somewhat doubtful.

Iodine and its effects on the skin may best be studied in the form in which it is most largely administered, as a compound with potassium. The iodide of potash gives rise to acne when given in a large dose, or even a very small dose with some people. The peculiarity about the rash is that it comes often, comes out in isolated pimples, especially about the face, neck, shoulders, and back, and as the first batch fades away so there appears a fresh jimple here and there, and this may go on for weeks or months, so long as the patient is taking the drug, without giving rise to any serious discomfort. As a rule there is not much itching, and the chief annoyance is in the disfiguring effect produced. It is well to remember that this rash may appear without any of the symptoms of iodism, such as pain in head, running from eyes and nose, and suffusion of conjunctivæ.

This drug may produce a vesicular or bulbous eruption. Such cases have been recorded by Drs. Tilbury Fox, Broadbent, and others. It may give rise also to purpura, and even to a fatal result, as the following case recorded by Dr. Stephen Mackenzie in the "Transactions of the Royal Medical and Chirurgical Society":—

"An infant aged five months, with well-marked congenital syphilis, had prescribed for it a mixture containing iodide of potassium in 2½-grain doses. In three-quarters of an hour after taking the first and only dose the child's face was noticed to 'turn black,' and, as this increased, the child was brought to the hospital three hours after taking the medicine. When first seen the whole of the face was swollen, of a purplish-black tint, eyelids closed from extravasated blood, lips and chin tensely swollen, and of an almost black colour. The cheeks were discoloured by aggregated patches of purpura. There were a few spots on each arm, but more elsewhere. A few abortive pustules were scattered over the body. While the patient was watched the purpuric patches perceptibly increased in size, until in the course of an hour or so the scalp and face were fairly covered. Next day the whole face was swollen, and of a port-wine colour, and there were purpuric spots on both arms and legs. The extravasated blood underwent some changes of colour, and parts of the skin of the face became necrosed in the course of this and following day. The child died in 68 hours, and analysis proved the medicine free from iodine, and made it certain that the child had not taken more than 2½ grains."

Bromide of potash also produces a rash similar to that of the iodide, but when the two salts are combined they give rise to a more serious and disfiguring result. At a meeting of the Clinical Society on February 8, 1878, Dr. Crocker brought forward a somewhat rare form of bromide eruption in this country, but which seems more common in France, where the drug is extensively used, and in large doses. Dr. Crocker thus describes the case:—The patient was a man aged 49, suffering from paralysis, and had been taking 10 grains of bromide with 5 of iodide, three times daily, for nearly a month, when an acneiform eruption began to appear on the face. The rash commenced on January 23, and he was seen by Dr. Crocker on February 6. On each cheek there was a raised patch the size of a crown piece, of a dull livid red colour, boggy, and covered by a scab, whilst at its margins were several yellowish points, exuding pus, epithelium, and sebaceous matter. There were smaller patches on the alæ nasi. Since that date the eruption diminished. No trace of iodine or bromine could be found in the urine. Small

doses seemed capable of producing it, and the opinion that it was due to a special idiosyncrasy seemed pretty general, although, judging by the experience in France, large doses had something to do with it. The bromide rash may appear in a suckling infant whose mother is taking the remedy. This case has been detailed because it seems to bring vividly before the mind the disadvantages attendant on the use of these most important and useful drugs, and because such a case is more apt to engage the attention to details.

We come now to irritation of the skin by local remedies, the rash generally being due to their topical irritant effects; but when these applications are made to a large raw surface, absorption may occur, and the same results be brought about as by internal administration. Iodide of starch was for a time very fashionable in the treatment of sores due to syphilis, and here the iodine may be absorbed, and give rise to a sharp attack of urticaria, as described by Dr. Tilbury Fox. Arnica may also give rise to swelling and redness of the skin, and it may be well to state here, what all who have had to do with the treatment of wounds must have noticed, that even the mildest applications will sometimes induce great local irritation—thus, water-dressing applied for any length of time will induce a peculiar rash, causing the most intense itching, and leaving behind a raw surface. Poultices will sometimes bring about the same result; and we have seen this same pustular rash as the outcome of the anti-septic method of treating wounds. Sometimes the rash appears in a day or two.

Sulphur plays an important part in these rashes, because it is still so largely used in the treatment of scabies, or any suspicious eruption about the hands and wrists. It gives rise to a dry state of skin, but may set up eczema, and then the scratching may make matters far worse. It is not uncommon for the irritation produced by the sulphur ointment to be mistaken for the original disease, and thus cause a more vigorous use of it, with the result of much aggravating the condition it is intended to cure.

Croton oil is familiar to all as a favourite and powerful counter-irritant. It gives rise to a series of small pustules with some redness. It should on this account be used with care in all cases of delicate or easily-irritated skins.

Chrysophanic acid ointment has been much vaunted as a remedy for psoriasis, but it is so very irritating that it requires great caution in its use. The first case in which we saw its effects was in hospital practice. A woman with psoriasis about the arm and shoulder was told to apply the ointment, but returned much disgusted in a day or two to say that her linen was spoiled, and it was found stained of a deep, dark purple colour, and, in addition, there was severe erythema extending from the seat of disease up the arm. The ointment was discontinued, and the irritation soon subsided. In another case the ointment was applied to a patch over the knee; it caused erythema all round the part affected, and gave rise to conjunctivitis, which lasted two or three days, but in each case the local disease was removed. It is also said to turn the hair a peculiar purplish brown tint and to stain the skin, but Dr. Balmann Squire states that this may be removed by benzol.

It must not be forgotten that most agents used as counter-irritants will, if persisted in for any length of time, and more especially if combined with excessive friction by over-anxious patients, especially if advanced in life, give rise to more or less eczema.

The diagnosis of these rashes depends on the acquaintance of the observer with the fact of their existence as due to remedies, and in such cases a careful inquiry into any possible use of such drugs will clear up the mystery.

As to treatment, in the majority of cases it is simple enough. At once cease the use of the offending agent, and the effect will disappear, but if this does not occur satisfactorily, emollient and soothing applications should be used, the simpler the better, such as sweet oil, simple cerate, &c. Baths are often of great use, especially in causing the entire removal of any local irritating agent; and may be used warm with bran or alkalies, but carefully eschewing the use of soap.

With regard, however, to the two most important drugs, iodide and bromide of potassium, it is often of the utmost importance to continue their administration, and often by strictly persisting with the medicine the rash ceases to appear, or only comes out in isolated acne spots, which the

patient does not mind. In other cases the distress is so great, and the disfigurement so obnoxious, that a continuance of the remedy is impossible, unless one can find some combination which will prevent this. Dr. Grimes states that in arsenic we possess the means of preventing the above-mentioned drawbacks—it may be given in the form of Fowler's solution, in doses of three to five minims, and in troublesome cases is well worth a trial.

M. R. C. S.

AMERICAN QUININE.

AN important paper on "Quinine in Pharmacy and Quinine in Commerce" was read lately by Mr. Daniel C. Robbins, of the firm of McKesson & Robbins, to the New York College of Pharmacy, and as it contains some facts not otherwise readily accessible, we are glad to be able to publish the report. Mr. Robbins has kindly furnished us with the paper.

It was first shown that sulphate of quinine takes precedence in point of importance over every other medicine used in the United States. The first rank is generally assigned to opium, but the total consumption of this drug, including its use as an intoxicant as well as a medicine, does not exceed 220,000 lbs. per annum, and the value in bond of this may be taken to average \$4 per lb., or rather less than \$1,000,000 annually. The yearly consumption of quinine in the United States has been computed at 800,000 oz., which, at an average of \$2.50 per oz., gives a total of \$2,000,000 per annum. If cinchona and all its alkaloids were taken, the excessive importance of that drug would be still more striking.

QUININE EXAMINED.

Mr. Robbins then referred to an important paper on the ether test for quinine, read before the London Pharmaceutical Society in February, 1877. Dr. Paul's paper commences by expressing the author's opinion that in using ether as a test for the purity of sulphate of quinine, there is a great liability of overlooking the presence of a very considerable amount of *cinchonidine*, because this test is based upon the relative solubility of quinine and cinchonidine in ether, quinine dissolving in its own weight, while cinchonidine requires from 100 to 150 parts of ether, as when one decigramme of cinchonidine sulphate is mixed with two cubic centimetres of ether and ammonia the presence of the insoluble alkaloid is distinct; but when the same quantity of cinchonidine salt is mixed with a large proportion of quinine the result is different, because the presence of quinine increases the solubility of the cinchonidine in ether, and hence, he says, "I have come to the conclusion, as the result of repeated experiments, that the limit within which cinchonidine cannot be detected in quinine is very much higher than is commonly supposed." Dr. Paul's paper then proceeds to describe his test for pure quinine, which is a modification of the well-known Kerner test, as adopted in the German Pharmacopœia, and tables were submitted giving the result of the examination of nine samples of quinine of different manufacture, all bearing the ether test, with variations of from less than 2 to 10 per cent.

The discussion which followed pointed to the conclusion that to insist upon an entire separation of the other alkaloids of cinchona was unwise, if not impossible, as the price of quinine would be *enormously enhanced* without adding to its therapeutical value.

Mr. Robbins recognises the value of Dr. Paul's paper as showing the proper value of the ether test, but he adds:—

The ether test remains as our best practical test for the estimation of bleached and unbleached sulphate of quinine, both of which should completely dissolve in accordance with the directions of the Pharmacopœia.

Another important paper by O. Hesse, of Stuttgart, of well-known celebrity as a quiniologist and manufacturer of quinine, of the firm of Jobst & Co., has also recently appeared, and it was translated, condensed, and published in the *American Journal of Pharmacy* for June, 1878. It was an exhaustive and scientific examination of the alkaloids of cinchona bark, which are placed at 25 in number, either abstract alkaloids or alkaloidal variations, as the result of conditional treatment. Any criticism of a paper of this

sort, outside of a company of professional quinologists, is out of place, because of the long experience and attainments of the author. But it may be said that this paper, in connection with Dr. Paul's examination, as a pharmacist, of the quinine of commerce, fully shows the complications attending any critical examination of the state of the cinchona alkaloids, while there are circumstances of much interest in connection with Dr. Paul's essay which should be alluded to. Nine varieties, it is said, of different manufacture of European quinine were examined; and, when it is considered that there are in all Europe but 10 manufacturers of note—in England, 2; in France, 3; in Germany, 5; and in Italy, 2 or 3—and that the Italian quinines are but little known, it is only fair to infer that these nine varieties embrace all the brands of quinine of importance in European commerce. This point leads to the consideration of the quinine commerce in the United States. The author alluded to the history of the alkaloid from its discovery by Pelletier and Caventon in 1820. When he was apprenticed in 1826 it was just coming into use as a malarial preventive, or tonic, but more generally calisaya, or quinine bark, as this variety was then frequently called, was powdered and prepared for market as a proprietary article in neat packages of one, two, and four ounces, with directions for domestic preparation and use, and extensively sold. But the new alkaloid salt worked its way into increasing use, and it made its first appearance in the Customs list of the country in 1832 under a *protective duty of 15 per cent. ad valorem*, in place of 5 per cent, as heretofore, among *non-enumerated articles*.

The demand for quinine increased, but the supplies of cinchona bark more than kept pace with this demand; and the price for quinine sulphate declined from several dollars to one dollar and 25 cents per ounce, when the Peruvian Government conceived the purpose of making cinchona bark a Government monopoly, because at that period our supply of calisaya or quinine bark yielding not less than 2½ per cent. of quinia was supplied by the single South American port of Callao.

At that period 2½ per cent. was considered to be the minimum at which cinchona bark could be successfully treated for quinine; and an arrangement was made with English capitalists for advance on shipments. The crude bark was controlled and so managed that the price of sulphate of quinine was gradually advanced in the American market until it reached \$4 per ounce. This monopoly, however, like most arrangements of the sort, could not be continued for a long period. The increased price brought into use better methods of process in manufacture; and it was found that lower grades of bark, yielding less than 2 per cent., could be used with profit for the manufacture of quinine. The enormous development of the manufacture of quinine in our country dates from this period, as our market has always been well supplied with the cheaper grades of bark, and but sparingly with the more valuable varieties. At the present time it is usually difficult to obtain, in the American market, cinchona bark that will yield much above 2 per cent. of quinine, while in Europe all grades yielding less than 2 per cent. are classed as low.

Taking the year 1850 as a starting point, because at that period the Government monopoly of bark, which has been referred to, existed, the price of quinia sulphate of American manufacture, for the past 27 years, has ruled, and our tariff alterations have varied, as follows:—

| Years | Variations | Duty on Quinine | Duty on Bark | Years | Variations | Duty on Quinine | Duty on Bark |
|-------|-----------------|-----------------|--------------|-------|-----------------|-----------------|--------------|
| 1850 | \$ 3.60 to 4.00 | 29 | 15 | 1864 | \$ 2.60 to 3.30 | 45 | 20 |
| 1851 | 3.60 3.90 | " | " | 1865 | 2.45 3.20 | " | " |
| 1852 | 2.80 3.58 | " | " | 1866 | 2.37½ 2.50 | " | " |
| 1853 | 2.70 3.57 | " | " | 1867 | 2.00 2.37½ | " | " |
| 1854 | 2.70 2.80 | " | " | 1868 | 2.00 2.40 | " | " |
| 1855 | 2.60 2.70 | " | " | 1869 | 2.10 2.46 | " | " |
| 1856 | 2.40 2.70 | " | " | 1870 | 2.20 2.30 | 20 | Free |
| 1857 | 1.40 2.00 | 15 | Free | 1871 | 2.30 2.50 | " | " |
| 1858 | 1.25 1.40 | " | " | 1872 | 2.45 2.50 | " | " |
| 1859 | 1.25 1.75 | " | " | 1873 | 2.45 2.50 | " | " |
| 1860 | 1.70 2.00 | 20 | 10 | 1874 | 2.40 2.50 | " | " |
| 1861 | 2.00 3.00 | 30 | 15 | 1875 | 2.25 2.35 | " | " |
| 1862 | 2.00 3.00 | 45 | 20 | 1876 | 2.10 2.45 | " | " |
| 1863 | 2.50 2.85 | " | " | 1877 | 2.38 4.50 | " | " |

The most noticeable fact in this collection of figures is the

decline which took place between 1857 and 1860, when, because of the imposition of a duty of 15 per cent. on sulphate of quinine in 1857, in place of a differential duty of only 5 per cent. as between bark and quinine from 1846 to 1857, the Pelletier Company undertook the manufacture of quinine in New York. The price of quinine in 1856, when the differential duty was 5 per cent., was \$2.70, and in 1857 it ranged from \$2 to \$1.40; 1858, \$1.40 to \$1.25; and in 1860, \$1.25 to \$1.75. In 1861, when the French company left, it was \$2, and in 1862 it advanced to \$3, as the table shows.

Since 1870 the duty on sulphate of quinine has been 20 per cent., and South American cinchona bark has been admitted free, but all the other salts of quinine and alkaloids of cinchona bark are still subject to the old duties of 45 per cent. and 40 per cent. respectively, as before 1870, when cinchona bark paid a revenue duty of 20 per cent.; and noting the fact that bark is now free, and considering the growing importance of quinidia and cinchonidia, as also other preparations of cinchona which are coming into large use, our present tariff duty on all cinchona preparations, including sulphate of quinine, when we take into account the altered condition of the market for cinchona bark, is the most objectionable that has ever existed at any period in our history.

The recent fluctuations of the bark and quinine markets were next illustrated by quotations from a German report.

Within a recent period the price of cinchona bark has been regulated by the manufacturers of quinine, especially in the United States; but at present, as the result of an increased demand for quinine, and an inadequate supply of bark, the price of the last cannot be controlled. Hence we want free access to foreign markets, not only for bark, but for quinine, as good brands of European quinine are not unfrequently quoted at a difference of 30 to 60 cents per ounce. Manufacturers of quinine can only contract, or offer, quinine in safety when in possession of fortunate supplies of bark, and the European market is becoming more and more the best market for desirable cinchona, especially for the cultivated East India barks, yielding as high as 7 to 8 per cent. of quinia, because all these last varieties, of so much interest, and of growing importance, are subjected by our tariff policy, in regard to navigation, to an exclusive duty of 10 per cent., while South American barks are admitted free.

The successful cultivation of cinchona in the East, and the introduction and extensive use of the hitherto waste alkaloids of cinchona, are the two most important facts within the range of our pursuit.

These facts call imperatively for an alteration in our Customs laws, and a better knowledge and familiarity with the cinchona barks in foreign markets, and the quinines of foreign manufacture, as there are especial peculiarities about our domestic as well as foreign quinines that deserve examination in pharmacy.

The knowledge that unbleached English sulphate of quinine does make a perfect solution in ether, while our American brands do not, and that the quotation for both for years has been the same—a difference of only 25c. per oz.—while the labels for both have been similar, are facts that have not been understood until recently.

The advertisements of several firms, that they use, in the manufacture of their preparations, only *American quinine and white pure bleached quinine*, are simply ridiculous. Why should any vegetable alkaloid be subjected to a bleaching process? and why should American quinine be superior to foreign, as it is well known that the latter is more usually the product of the better barks of commerce? And where is the superior knowledge of process? and where can an American quinologist of repute be found? are questions that should be at least considered before any appeal is made to a prejudice which is the result of Government exclusion and private monopoly of the market for years.

Customs Duties and Tariff Variations on Sulphate of Quinine since 1820.

For ten years from 1820 to 1832, 5 per cent. revenue duty;

For ten years from 1832 to 1842, 15 per cent. protective duty;

For four years from 1842 to 1846, 40c. per oz. specific and protective duty;

For eleven years from 1846 to 1857, 5 per cent. differential revenue duty;

For four years from 1857 to 1861, 15 per cent. protective duty ;
 For five months from March, 1861, to August, 10 per cent. differential duty ;
 For one year from 1861 to 1862, 15 per cent. differential duty ;
 For eight years from 1862 to 1870, 25 per cent. differential duty ;
 For six years from 1872 to 1878, 20 per cent. differential duty ;
 on sulphate of quinine, and 45 per cent. on other salts of quinia, and 0 per cent. on the other alkaloids of cinchona.

Comparative Densities of various Quinines, as ascertained by powdering the sulphate, and then shaking one part of the powder in six parts of ether. Zimmer's, occupying just one-half the space of Boehringer's, and hence taking—

Zimmer's, German as 100

The others range :—

| | |
|-------------------------------------|--------|
| Howard's, English | as 110 |
| Pelletier's, French | " 110 |
| Dufour's, Italian | " 110 |
| C. T. White & Co.'s, American | " 115 |
| Koch's, German | " 120 |
| Thomas's, French | " 125 |
| Rosengarten's, American | " 130 |
| Braunschweig's, German | " 159 |
| Jobst's, German | " 169 |
| Dubosc's, French | " 169 |
| Powers & Weightman, American | " 165 |
| Fabrica Lombarda, Italian | " 175 |
| Boehringer & Sons', German | " 200 |

Combinations with Cinchonidia in various proportions, to make a clear or described solution.

Howard's will bear 10 per cent. of cinchonidia, and make a good solution.
 Pelletier's will bear 5 per cent. of cinchonidia, and make a good solution.
 Pelletier's will bear 10 per cent. of cinchonidia, and make a fair solution.
 Thomas & Co.'s will bear 5 per cent. of cinchonidia, and make a fair solution.
 Jobst's will bear 5 per cent. of cinchonidia, and make a moderately fair solution.
 Koch's will bear 5 per cent. of cinchonidia, and make a moderately fair solution.
 Braunschweig's will bear 5 per cent. of cinchonidia, and make a moderately fair solution.
 Fabrica Lombarda, Dubosc's, Dufour's, and Zimmer's will dissolve clear, but will not bear the addition of cinchonidia.
 Boehringer & Sons' makes a poor solution without the addition of cinchonidia.
 American, No. 1, makes a poor solution without the addition of cinchonidia.
 American, No. 2, makes a good solution without the addition of cinchonidia.
 American, No. 3, makes a good solution without the addition of cinchonidia.

DANIEL C. ROBBINS.

New York, January 23, 1879.

As well as the foregoing paper we have received a letter from Mr. Robbins in which he says :—

The paper was read as an introduction to the general subject of "Quinine in Commerce and in Pharmacy," a subject of much interest at the present time, because during the past season our supply of quinine, of American manufacture, proved to be inadequate; and hence foreign quinines were introduced as a necessity, notwithstanding a widespread prejudice against these as inferior articles. The claim of our American manufacturers for protection against foreign competition has always been in substance as follows :—We manufacture as good an article as any in the world. We have been at great expense in providing the necessary apparatus for manufacture, and in carrying stock for a sufficient supply for the wants of the country at all periods. Our arrangements are such that we can always supply all that may be required, and hence the foreign article should be excluded, as it has been, by protective duties."

The aim of the meeting was to afford an opportunity to exhibit, in comparison, samples of quinine of all the various manufactures in Europe and in America. Sixteen varieties of different manufacture were exhibited of bleached and unbleached sulphate of quinine, as found in commerce, and treated with ether according to the U. S. P.; also the same in different combinations with cinchonidine, with a statement of the different densities of each or volume when powdered and shaken with ether alone, and allowed to settle carefully—an interesting fact of importance in the use of excipients for pill mass wherein quinines of much volume and whiteness require to be treated very differently from the of less.

At this distance from Europe, and in view of the fact that foreign quinines have little standing, it was deemed

best, for the sake of diffusing more precise information, to use the names of the foreign manufacturers, but to speak of our own American brands as Nos. 1, 2, and 3.

The result of the exhibition proved that very erroneous opinions had been entertained in regard to quinines; that the general impression that the ether test should not be applied to unbleached quinine was an error. Three samples of unbleached quinine were exhibited, all three costing the same price in the open market, two American and one English (Whiffen's), and the latter made the requisite solution, while the two former had been proved by a careful quantitative analysis to contain a large amount of cinchonidine which had never been separated—the one being, without doubt, what is called "hospital" or "mother water" quinine, and the other an unbleached and unseparated product of cinchona bark of fair quality.

Various white quinines were then exhibited, and it was shown that no one of the samples of domestic manufacture would bear any combination with cinchonidine and make a clear solution with ether, U. S. P., while Howard's could be readily combined with 10 per cent., and Pelletier's with 5 per cent., and still bear the ether test. Further, the demand in the American market is for white alkaloid salts of much volume, and to meet this demand the German quinine manufacturers excelled all others; while no one of these quinines could be combined with cinchonidine to the extent of 5 per cent., and make a proper solution in ether, as please note copies of blackboard tables,* which were submitted.

HOW PLANTS FEED.

By C. E. STUART.

(A Paper read before the Chemists' Assistants' Association on November 13, 1878.)

THE subject of the nutrition of plants is of interest on account of the great part they have played in fitting the earth for man, and which they now play in affording him nutriment, directly as corn and vegetables, indirectly as the flesh of herbivorous animals.

A paper read before our Association in the summer gave an excellent account of the process of digestion in animals, taking that of man as the highest form. With the materials of our food, whether roast beef, oatmeal, potatoes, frogs, or whale's blubber, we are familiar. We also know that the final end of animal bodies is to be resolved into inorganic constituents—into dust and ashes. I propose in this paper to show how the gap in the cycle of changes is filled up; how inorganic constituents are built up into organic structures; to speak, in fact, of the nutrition and digestion (if I may so term it) of plants. I will put the relative connection of the three kingdoms of nature with regard to life in another way, in order to show clearly their relationship. Plants receive force from the sun, together with materials possessing little latent energy—water, carbonic acid, and ammonia. These reappear as organic products containing much latent energy, together with free oxygen. Animals receive these compounds, together with oxygen, and give off the energy contained in them as heat, work, locomotion, &c., as well as carbonic acid, water, and ammonia (urea). By the action of universal laws this heat and work, this carbonic acid, water, and ammonia, are diffused all over the world, available again for the food of plants.

With the growth and reproduction of plants I have nothing to do; it will be sufficient if I can clearly show how, as I have just stated, from rocks, water, and air are formed both the grass beneath our feet and the giant trees of the forest.

Now, before inquiring how plants feed, we must know something of the materials on which they feed.

There are only two possible sources of the food of plants it must be either organic or inorganic. If the former, it must be derived entirely from the soil, for there is no appreciable quantity of organic matter in air or water. This food being organic, there must have existed organic matter for the first created plant to feed on; and more, there must

have been originally a supply in the soil sufficient for the needs of all plants to the end of time, otherwise their constant consumption as food, or by burning, would soon have exhausted the earth. But we find that the quantity of organic matter in the soil now is very small, not sufficient perhaps for a year's supply, and, moreover, its percentage remains constant. And finally, it is easy to grow plants under conditions which prevent the absorption of matter in an organic form. Thus, then, we arrive at the conclusion that the food of plants is inorganic. There are, however, exceptions, as fungi, parasites, &c., which I shall consider further on.

Now, what are the substances which enter into the composition of plants? Knowing them, we shall be able to estimate the relative importance of various kinds of food.

In the first place, plants contain more or less water, varying from 10 per cent. in some seeds to 90 per cent. or even more in fungi and water-plants. When dry plants are burnt they give off various gases, and there is left an ash consisting of mineral salts. This ash forms usually a very small percentage of the dry plant, but in some cases, as in rhubarb and *Cactaceae*, it rises to a considerable extent.

There are certain elements which are found in all plants. (I set aside those abnormal plants mentioned above.) These are:—Carbon, oxygen, hydrogen, nitrogen, sulphur, phosphorus, potassium, calcium, magnesium, and iron.

It has been shown by experiments that when a plant is deprived of any of these elements it must soon die: they are, therefore, essential to its existence.

Plants usually contain also some of the next series of elements:—Sodium, manganese, silicon, chlorine; marine plants also iodine and bromine. Rarely are found, or have been reported to have been found, aluminum, copper, zinc, cobalt, nickel, strontium, barium, lithium, cesium, titanium, rubidium, arsenic, and fluorine.

Carbon is the most important of the above elements, forming usually about one-half the entire dry weight of plants. It is derived from the air, where it exists as carbonic acid, which is the product of combustion from the lungs of animals and from burning organic matter.

Hydrogen is derived from water by a decomposition, which I shall presently refer to.

Oxygen enters largely into the composition of plants (by weight), but in considerably less quantity than would be required for the burning up of the carbon and hydrogen. It is derived chiefly from the air.

Nitrogen is a scanty but extremely important element: it forms from 1 per cent. to 3 per cent. of the dry weight. Free nitrogen cannot be absorbed by plants: its source is, therefore, salts of ammonia and nitrates. These are furnished by the excrements of animals, by the atmosphere, and by the soil; the small proportion of organic matter in which seems to favour the concentration around it of ammonia and its salts, just as charcoal absorbs certain gases.

Sulphur and Phosphorus are taken up as sulphates and phosphates, chiefly of lime and magnesia.

Iron occurs in extremely minute quantity, but is, nevertheless, essential to green plants.

Calcium, Magnesium, Sodium, and Potassium, are taken up in solution as various salts, phosphates, chlorides, sulphates, and nitrates. Some *Characeae* secrete a complete coat of carbonate of lime.

Silicon is taken up as a dilute solution of silicic acid, many *Diatomaceae* form a "shell" composed of it.

The other elements are also in the form of salts.

Out of the ten essential elements given above are formed in a manner which I shall presently describe, these compounds, some or all of which are universally found in plants, namely, cellulose, protoplasm, chlorophyll, starch, sugars, fats.

Cellulose is the substance which forms the walls of cells, and therefore the greater part of the plant. It contains only carbon, hydrogen, and oxygen.

Protoplasm is found in the interior of living cells. All substances which are to benefit the plant are directly or indirectly made from it. It is a mixture of various substances, called albumenoids, whose essential elements are carbon, hydrogen, nitrogen, oxygen, and sulphur.

Chlorophyll is of a green colour; it is the substance by means of which alone inorganic materials are converted into those of an organic nature. All plants, therefore, which have no chlorophyll must take up their food in an already assimilated condition. Such are fungi and a few others. Chlorophyll contains carbon, hydrogen, oxygen, and nitrogen. But iron is known to be essential to the formation of that green colour which is its characteristic; and when formed, the presence of potassium salts is necessary for its activity.

Starch, Sugars, and Fats are the immediate produce of the chlorophyll; in their formulae are various proportions of carbon, hydrogen, and oxygen. From their decomposition proceed the various substances which together constitute the plant.

I have now considered (1st) the chief elements, and (2nd) the chief compounds of which the plant is built up. Next I will glance at the forces which set the process by which feeding is accomplished in motion. I shall then look at the processes themselves.

The first great force is that most plentiful of all—the sun's rays, rich as they are in producing light, heat, and chemical activity. The action of these rays on plants is rather complicated. The following are the chief points connected with my subject:—

Heat causes the germination of seeds, and favours various chemical processes.

Light (with a certain quantity of heat) causes chlorophyll to turn green, and to decompose carbonic acid. In the dark, therefore, only plants containing no chlorophyll can grow. In ferns and the cotyledons of the coniferae, however, if the temperature is sufficiently high, chlorophyll turns green even in the dark.

The rays which on some substances, such as chloride of silver, have a chemical action, on plants have chiefly an effect on growth, influencing its rapidity, and causing various movements.

Again, since a plant is composed principally of a series of closed bags or cells, some force must come into play in order to allow water or sap to enter these cells, and to carry the contents of cells from one to another. This force is osmose, the general expression of the action of which is that, when two liquids of different densities are separated by a membrane, the lighter liquid penetrates this membrane, and mixes with the denser, while a small quantity of the denser passes in the reverse direction to mix with the lighter. Thus it will easily be seen that, when a perpendicular row of cells containing thick sap has its lower end in contact with water or with damp earth, water (with salts dissolved in it) will be absorbed, will gradually rise all up the row of cells, and be distributed over the plant.

But this process is a comparatively slow one, and, on account of the rapid growth of plants and the immense evaporation of water from the leaves, a quicker method is required. Therefore the tissues of the wood are used. These consist of thick-walled cells and vessels. The water taken up by the roots is discharged upon and into the substance of these wood cells and vessels; and whenever there is a loss of water anywhere in the plant, the wood nearest the part supplies more, and takes up again from the lower parts of the wood. Thus the wood supplies and holds water somewhat as a sponge does, not by endosmose or capillarity (for the cavities of the wood cells and vessels rarely contain fluid, and are often partially or wholly connected, while the size of the tubes thus formed is too great to allow of the ascent of fluids by capillarity to any height). These two last forces, however, doubtless come into play when the conditions are suitable.

There are various other processes connected with nutrition due to chemical action.

Having, I hope, cleared the ground beforehand, I can now explain the actual process of nutrition.

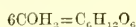
What occurs in an ordinary green plant in sunlight is as follows:—

1. Water evaporates from the cell of the leaf into the air.
2. More water and dissolved salts is therefore brought to supply its place. This comes along the spiral and pitted vessel and cells of the fibro-vascular bundle, and is distributed to the cells whence evaporation took place.
3. Carbonic acid enters through the stomata, and diffuses into the cells containing chlorophyll.
4. The chlorophyll decomposes the carbonic acid and

* Recent investigations make it very probable that under the influence of atmospheric electricity plants are enabled to assimilate free nitrogen.—Ed. C. & D.

water, one atom of oxygen being given off by each, and the carbonic oxide and hydrogen combining to form formic aldehyde (COH_2), the oxygen set free passes into the air.

5. The formic aldehyde under the influence of alkalis is transformed into glucose—



Or starch and oils may also be formed.*

6. The sugar, starch, or oil formed in the leaf has now to be transported to the growing points of the plant. The starch and oil are converted into glucose, and diffuse through the soft tissue of the petiole and stem, till they get to the point where they are to be utilised, where starch or oil is temporarily reformed at the expense of the glucose.

7. On its way this glucose will meet with some ammonium salt or nitrate taken up from the soil. A part of it is under this condition (probably by the influence of alkaline phosphates) changed into an albuminoid by the absorption of nitrogen.

8. The sulphur for the albuminoids is perhaps also taken up with the nitrogen, by the decomposition of calcic sulphate by oxalic acid, and the breaking up of the sulphuric radical thus set free. This is the origin of those crystals of calcic oxalate (raphides) so frequently met with in plant tissues, and thus the oxalic acid formed by various oxidation processes, and which may be injurious to the plant, is rendered innocuous.

It is remarkable that the substances containing no nitrogen, the carbo-hydrates, &c., which have an acid reaction, are conveyed from place to place only through the parenchyma of the stem, while the albuminoids, which are alkaline, are conveyed through the parenchyma of the bast bundles.

The chemical changes of the original starch into the complicated substances found in plants are accompanied by an absorption of oxygen, and an exhalation of carbonic acid and water—a true respiration. This goes on night and day, but it is only at night that it is very marked, and even then the amount of carbonic acid given off bears a very small proportion to that decomposed during the day.

At night the fixation of carbon ceases entirely, and then all cells give out only carbonic acid (in small quantity, as just stated). Thus the plant may be said to take in its food only during the day, but to digest it at all hours.

But instead of being at once digested, the food may be stored up for a future occasion, as in seeds, tubers, and eshy roots. The use of this reserve and the method of its utilisation is well shown in germination. Under the influence of heat and moisture the greater part of the contents of the cells is destroyed, with formation of quantities of carbonic acid and water. By this means the cells are filled with fluid contents, and active chemical life in their interior again rendered possible. The next process is the conversion of the remaining substances into gums and sugars, which are then used for the formation of cellulose, protoplasm, and chlorophyll.

I now come to some other conditions of nutrition. That parasites which contain chlorophyll, such as the mistletoe, does not differ materially from the general process, the plant behaving just as a graft does; some of its food is assimilated for itself by means of its chlorophyll, some is derived from an already assimilated condition from its host.

There are some plants which seem to thrive best when supplied with nitrogen in an organic form, in the shape of seeds or meat. Such plants are the sundews (*Drosera*). Darwin fed 50 of them with water only and 50 with small pieces of roast meat in addition. At the end of the summer those fed with meat weighed 21.5 per cent. more than the others, while their seeds were nearly four times as heavy. The organic substances are dissolved by an acid ferment resembling pepsin secreted by the leaves.

Plants containing no chlorophyll, as the class fungi, and a few few vascular plants, such as the dodders and broomrapes, cannot decompose carbonic acid; and therefore their food must be altogether derived from organic sources. Thus they feed on either dead or living plants and animals, absorbing oxygen and giving off carbonic acid.

In the above summary I have hardly shown the importance of various soils in their relation to the food of plants.

*The processes 4 and 5 are rendered probable by the researches of German botanists, but must not be taken for granted.

Although the absorption of salts by roots is to a great extent selective, and a plant can exist in a soil where the elements of its ash are present in any proportion, yet the more nearly these can be supplied in the *proper* proportion, the better will the plant grow.

On an analysis of the ash of plants it is found that there are four chief classes:—

1. Ash consisting chiefly of alkalis: such plants abound in starch and sugar.

2. Ash chalky, a condition met with in dicotyledons, especially in their leaves, fruits, and stalks.

3. Ash silicious, as in the stalks of leaves of many monocotyledons.

4. Ash phosphatic, found in plants and parts of plants which abound in nitrogen, as seeds.

The following table illustrates these classes, and shows also what salts should be supplied in the shape of manures to soils on which the plants are grown:—

| Ash of | Wheat | | Vetches | Beet (roots) |
|--------------------------------------|-----------|-----------|-----------|--------------|
| | Grain | Stalks | | |
| | Per Cent. | Per Cent. | Per Cent. | Per Cent. |
| K ₂ O | 29.35 | 10.0 | 32.82 | 23.9 |
| Na ₂ O | 1.1 | 0.85 | — | 53.1 |
| CaO | 3.4 | 5.4 | 20.78 | 4.8 |
| MgO | 10.7 | 3.3 | 5.31 | 2.2 |
| Fe ₂ O ₃ | 2.4 | 1.5 | 0.65 | 2.3 |
| SiO ₂ | trace | 5.6 | 2.52 | 2.1 |
| SO ₂ | 2.5 | 67.2 | 1.28 | 1.8 |
| P ₂ O ₅ | 49.7 | 7.05 | 10.59 | 2.8 |
| Cl | 1.3 | — | — | 6.3 |
| CO ₂ | — | — | 18.73 | — |
| KCl & NaCl .. | — | — | 7.30 | — |

There is always a waste of salts when plants are consumed by animals, for instead of being returned to the soil, the sea receives them as sewage. A loss of phosphates occurs on account of the practice of interment in churchyards. When sewage is properly turned to account on land, enormous crops may be raised, as at Birmingham.

By studying these ashes in a scientific way, and applying the results obtained to agriculture, a great gain has resulted to that art by teaching the best method of raising crops, of manuring soil, and preventing its exhaustion. Thus the knowledge of the food of plants is interesting to the world at large, and if any who read this feeble exposition of it, and the processes in connection, derive any benefit from it, I shall be content.

Metropolitan Reports.

CITY.

DESTRUCTION OF MESSRS. HORNIMAN & CO.'S TEA WAREHOUSE.—The large building in Wormwood Street occupied by Messrs. Horniman & Co. was partially destroyed by fire on the night of February 4. The building contained about 50,000l. worth of tea, of which very little will be saved, as what was not destroyed by fire was hopelessly damaged by the floods of water which were poured on the building. Messrs. Horniman were insured in several offices. The cause of the fire cannot be ascertained.

SOUTHWARK.

ATTEMPTED SUICIDE.—Joseph M. Talbot, 24, described as a druggist's assistant, was charged at the Southwark Police Court with attempting to drown himself in the Thames. The prisoner's father said he believed his son's mind had latterly been affected by excessive reading of religious books. The prisoner, in answer to the charge, said he had been ill for a long time, and did not know what he was about. He had no idea how he came into the river, and he was thankful to the waterman for saving his life. Mr. Partridge sent him under remand to the House of Detention, and awarded the waterman who had taken him out of the river 5s. from the poor-box fund.

WALWORTH.

THREE HUNDRED POUNDS DAMAGES CLAIMED FOR THE BITE OF A DOG.—On January 31 a servant girl named Brady sued Mr. John Butterworth, chemist, Walworth, for 300*l.* damages for a bite from a dog kept by defendant. It was admitted that the dog in question was likely to bite strangers, though it had never been known to do so before; in fact, it was kept to bite any unbidden guests who might visit the premises after dark. There was the usual conflict of evidence as to provocation on the part of the bitten, and it was stated that the girl had kept her bed for a fortnight rather for the sake of rest than from the actual effects of the bite. The jury were locked up for three hours, when they stated that there was no chance of their agreeing; they were therefore discharged.

WOOLWICH.

AN ASSISTANT POISONED BY PRUSSIC ACID.—Edward Johnson, 24, assistant to Mr. F. T. Atkins, chemist, Powis Street, Woolwich, was found dead about 9 P.M. on January 27. He had been in Mr. Atkins' employ only one day, and as he had exhibited signs of intoxication he had been persuaded to lie down. A bottle of prussic acid and another of brandy were found near him, and his lips smelt of prussic acid, but the features did not indicate a violent death. There was no measure in the room, and it is believed by Mr. Atkins, surgeon, son of Mr. F. T. Atkins, that he had taken about 20 drops of the acid, which would cause death in half-an-hour. The use of small doses of the acid to remove the effects of drink is well known among chemists' assistants, the dose being not more than five minims. The bottle found near the deceased did not come from Mr. Atkins' shop, and he had probably brought it with him. His relatives live at Spalding, Lincolnshire. A verdict of death from an overdose of prussic acid was returned at the inquest.

Provincial Reports.

ABERDEEN.

PHARMACEUTICAL FESTIVITY.—The chemists and druggists held a conversatione, supper, and ball on the evening of February 12. The chairman (Mr. David Richie) made a short but telling speech, in which he advocated earlier closing, and consequently better attendance on the educational classes provided. "Let us," he said, "by uniting our efforts and conserving our means amongst ourselves in preference to sending subscriptions to the Pharmaceutical Society in London, establish a school of pharmacy here, which will vie with kindred institutions in the south."

BIRMINGHAM.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.—ANNUAL SOIRÉE.—The annual soirée of the Association was held in the Town Hall, Birmingham, on January 23. There was a large attendance of chemists and their friends, and among other visitors we may mention Mr. A. Bottle (the Mayor of Dover), Dr. Bottle, Dr. Alfred Hill, and others. The hall was illuminated with the electric light. Nine electric lamps on the Jablochkoff principle were supplied and worked by Messrs. Martineau & Smith. The light was steady, and worked capitally, adding much to the interest of the meeting. The entertainment commenced with a promenade concert of operatic and other music, played by Messrs. Synger & Gilmer's full military band and by the organ. Mr. Stimpson, organist of the Town Hall, presided at the organ. The music was well rendered and highly appreciated, particularly the air from "Nazareth" and the march from "Naaman," which were finely rendered by the band and organ together. Mr. H. W. Jones, F.C.S., F.R., M.S., exhibited some interesting and instructive experiments in the corridor, showing the combustion of a steel watch-spring in oxygen gas; the burning of carbon in oxygen. The effect of a monochromatic light was then shown upon colours, flowers, and engravings; these, which were beautifully coloured by daylight, seemed quite black under its influence. There followed a highly amusing lecture by Professor Ned-

dyson, the "Inventor of America," which greatly entertained the audience till about half-past nine, when dancing was commenced to the lively strains of Messrs. Gilmer's excellent band, and was carried on until a late hour. About 400 were present, and a most enjoyable evening was spent.

BRADFORD.

SEVERE SENTENCE ON A REGISTERED CHEMIST AND DRUGGIST.—At the Leeds Assizes on February 6, Hezekiah Thornton, of Bradford, was sentenced to 10 years' penal servitude for using instruments upon a young woman for the purpose of procuring abortion. At the last assizes the prisoner was charged with the wilful murder of the young woman, but was acquitted. Thornton is described in the newspaper reports as a herbalist, but his name appears on the registrar of chemists and druggists as having been in business before August, 1868.

BRISTOL.

SUICIDE OF AN AGRICULTURAL CHEMIST.—On Feb. 1 Mr. Edward Garraway Cope, 32 years of age, of the firm of Messrs. Proctor, agricultural chemists, was found, at 7 A.M., dead in his bed. A letter was found upon his dressing-table, in which he stated that he had been going out of his mind for some time, and he could stand it no longer. Mr. Steele, surgeon, stated that death was probably caused by strychnine.

CORK.

THE VALUE OF A CHEMIST'S TIME.—An Irish pharmaceutical chemist, named Keating, having had to attend as a witness in a probate case at Dublin, for five days, received 5*l.* for his time from the plaintiff who had called him, and who gained the suit. Keating's evidence at the trial was not of much importance, but he considered that he was entitled, as a professional man, to three guineas a day, and he therefore sued for the balance. In cross-examination it came out that he was a bankrupt and had nothing to do at the time when he went to Dublin. It was submitted that as an uncertified bankrupt he could not earn money, but on the other side it was urged that though a bankrupt could not trade he could receive money for his personal services. On this question the judge postponed his decision.

COVENTRY.

A DOCTOR COMMITTED FOR MANSLAUGHTER.—This is a case of a most unusual kind. On January 19 the infant son of George Barstock, labourer, Bishopgate Green, Coventry, was attacked with diarrhoea. On the 21st an order was granted by the Relieving Officer for Dr. Thomas Millerchip, medical officer of the No. 2 District of the Union, to attend the child and mother. During the four following days reiterated messages, verbal and written, and of ever-increasing urgency, were delivered to the doctor, asking him to come. On the 25th the child died, and the family were found in great trouble by two members of the Public Relief Committee. The case was reported to the relieving officer, and Dr. Millerchip admitted his negligence. Drs. E. Overton and E. Dewes made a joint *post-mortem* examination, and reported that there was no trace whatever of any disease, except the result of diarrhoea. Dr. Overton believed that medical attendance on either of the three days preceding its death would have saved the child's life. Dr. Dewes concurred, but added that he was surprised to find the child so much reduced in the time. At the inquest Dr. Millerchip was committed for trial at the Warwick Assizes.

GLASGOW.

DISAPPEARANCE OF MR. J. M. FAIRLIE.—On February 5 some sensation was caused in pharmaceutical circles in Glasgow by the report that Mr. J. M. Fairlie, well known as a member of the Pharmaceutical Council and member of the Executive Committee of the Chemists and Druggists' Trade Association, had suddenly disappeared. He had executed a deed of trust for the benefit of his creditors, and the accountant's opinion was that the estate would show about 10*s.* in pound. A meeting of the creditors is to take place on February 17, at 65 West Regent Street. Up to the latest report we believe no discovery has been made as to where Mr. Fairlie has gone.

HULL.

THEFT OF OPIUM.—On January 16 John Creighton, a young man, was sentenced to five months' hard labour for stealing 31 lbs. of opium, value 25*l.*, the property of Messrs. Lofthouse & Saltmer, chemists and druggists, Market Place, Hull. The accused was employed as porter by the prosecutors from October to December 21 last. The theft was discovered by his offering 4 lbs. for sale to Mr. Marshall, chemist, Beverley. Mr. Marshall suspected that all was not right, and followed the prisoner to Hull. Mr. Saltmer, one of the prosecutors, having been communicated with, gave the accused into custody, and when charged he admitted that he had stolen the opium from the prosecutors. On his house being searched 15 lbs. 12 oz. of opium was found under the flooring.

KENDAL.

PRIVATE TRADE RECIPES.—**LIBEL.**—At Lancaster Assizes on January 24, before Lord Justice Thesiger, an action to recover damages for libel was brought by Mr. C. W. Hodgson against Mr. Thomas Hinde, a druggist, both of Kendal. Last year Mr. Hodgson came on trial as apprentice to Mr. Hinde. An injury to his foot shortly after compelled him to be absent for some weeks, so he suggested that Mr. Hinde should secure another apprentice. The latter wrote to the plaintiff's grandmother, characterising this conduct as disgraceful, and saying he had been told that the plaintiff had got possession of some of his private recipes and he would prosecute him if they were used. As the communication was privileged and there was no evidence of malice to go to a jury, the case was ended by withdrawing a juror.

NOTTINGHAM.

A CURIOUS APPRENTICESHIP CASE came before Mr. Justice Grove at the last Nottingham Assizes (on February 6). In November, 1871, a Mr. Bunting apprenticed his son to Mr. North, wholesale druggist, Nottingham. By the terms of the deed it was stipulated that the youth should serve Mr. North until he should attain the age of 21 years, which would be on June 21, 1877. In point of fact the son came of age on June 24, 1876, and when that day arrived left his master's service, and Mr. North now sued Mr. Bunting, sen., for the loss of the son's services for one year. According to the defendant's version the solicitor who prepared the deed made a mistake, or was mis-instructed by the plaintiff, and the attention of all parties was called to it before the deed was executed, when the defendant desired that the mistake should be rectified, but the solicitor said that this was unnecessary, as the defendant's son could not be compelled to serve after he came of age. This was denied by the plaintiff, the solicitor, and the plaintiff's wife; and the jury appeared to believe their version of the affair, for they found a verdict for the plaintiff for 15*l.*

NOTTINGHAM AND NOTTS CHEMISTS' ASSOCIATION.—The annual supper of this Association took place on the 14th inst., at the George Hotel, when nearly 40 members and friends sat down to an excellent repast under the presidency of Mr. R. FitzHugh, F.C.S., the vice-chair being occupied by Mr. W. H. Parker. After the usual loyal toasts, Mr. Rivers Langton rose to propose "Success to the Nottingham and Notts Chemists' Association;" he eulogised the value of such Associations both for educational and trade purposes, and recommended their support as a means of promoting good feeling amongst the members, and coupled with the toast the name of the president, who suitably responded. Mr. W. H. Parker next proposed the health of the "Officers and Council of the Association," which was responded to by the treasurer, Mr. J. Rayner, and the hon. secretary, Mr. R. Jackson. Mr. Rayner then gave "The Pharmaceutical Society," to which the local secretary, Mr. FitzHugh, responded. Mr. Warriner next proposed "The Teachers of the Associates' Classes," which was responded to by Mr. W. Viddowson. The remaining toasts were "The Visitors," proposed by Mr. S. Parr, and responded to by Mr. F. H. Spencer; "The Chairman," proposed by Mr. Bolton; and "The Vice-Chairman," proposed by Mr. G. Shepperley, both of which were suitably responded to. The evening was agreeably enlivened by some good songs by Messrs. Towle, Fletcher, and Shepperley; and comic illustrations and songs by Mr. Mark Meats, Mr. J. F. King presiding at the pianoforte.

ROTHERHAM.

WILLIAM BEATSON FOUND GUILTY OF EMBEZZLEMENT.—During February 6 and 7 the Crown Court of the Leeds Assizes was occupied in the trial of William Beatson, 50, chemical manufacturer, who was indicted for obtaining 5,000*l.* by false pretences from Mr. John Henry Mycock, at Rotherham, with intent to cheat and defraud. According to the evidence for the prosecution the prisoner had represented to Mr. Mycock that he was the owner of a business which had made him wealthy, and from which he wished to retire solely on account of his age; and, through that representation, had induced Mr. Mycock to invest money in a business which was utterly and hopelessly insolvent, and overburdened with personal and trade debts. Beatson had been for many years a chemical manufacturer near Rotherham, and he himself resided in a house near to his works. He was understood generally to be a wealthy man, and the prosecutor believed in him thoroughly, which confidence the prisoner presumed and traded upon. Prisoner was a frequent visitor at Mr. Mycock's house, made a profession of religion, and had offered to Mrs. Mycock the consolations of religion. In July, 1877, Beatson called upon Mycock, who was the postmaster and vestry clerk at Masborough. The prosecutor was about that time to receive 4,000*l.* or 5,000*l.* from the Midland Railway Company as the price of certain land. The prisoner knew of this circumstance, and, being at that time in such a position that he could not carry on business any longer unless he got money somehow, he called upon Mycock. Prisoner told the prosecutor he had no children of his own, but that he had a nephew Arthur, who was in the business of the chemical works; and he proposed that Arthur and the prosecutor's son, a young man not yet 20, should have his business. He further stated that the business had done well for him, that he was in very comfortable circumstances, and that he should like to do the two young men a good turn. The bait, however, which he threw out was that Mycock should lend him some money, and so get some interest in the business, and that young Mycock, when he became of age, should become a partner under these easy conditions: He proposed that, to begin with, 2,000*l.* should be lent to him as a sort of stake in the business. The prisoner represented that his works and other property were of the value of 32,000*l.*, and, with the addition of 5,000*l.* for stock, he made up a grand total of something like 37,000*l.* Instead of being worth that amount of money, he was at that time at least 10,000*l.* in debt, and did not know which way to turn for money. On these statements the prisoner succeeded in borrowing 5,000*l.*, the whole of the money possessed by the prosecutor, and soon afterwards filed his petition for bankruptcy, and left Mycock a ruined man. After his petition had been filed Mrs. Mycock, naturally indignant, reproached him with his conduct, and suggested that at the time he borrowed the money from her husband he knew perfectly well that he was insolvent, and the prisoner admitted that he did. In defence it was argued that the prisoner did not know he was in an insolvent position when he obtained the money from the prosecutor. He was found guilty, and sentenced to 18 months' imprisonment with hard labour.

RYE.

THE COMMERCIAL ASSOCIATION of this town and district held its annual dinner on January 21, under the genial presidency of Mr. A. W. Smith, pharmaceutical chemist.

SHEFFIELD.

SEVENTY-SEVEN JUDGMENT SUMMONSES BY A DOCTOR!—On January 17 the Sheffield County Court was occupied in hearing 77 judgment summonses, in the whole of which Dr. James Mason was the plaintiff! The judge commented on the fact in strong terms, remarking that 33 of the 77 had not been served probably because the hard times had compelled the poor to remove from their homes. On the previous day Dr. Mason had tried hard to recover a guinea costs from a poor woman who had sued him for 1*l.* overcharge, but had been defeated. The judge refused him the sum demanded, saying that if a medical man were so lost to a sense of delicacy he must hold him to his strict right. He was granted 5*s.* costs, to be paid 2*s.* a judgment-day.

WALSALL.

ACTION FOR THE VALUE OF SAFES—At the Walsall County Court on January 16, Mr. J. B. Oerton, solicitor, Birmingham, sued Mr. Thomas Sneyd, chemist, for the sum of 12*l.*, being the value of two safes. This was the price agreed to in the transfer of some premises, but as the keys of the safes were not forthcoming the defendant refused to pay the full amount. He offered 10*l.*, or, if the plaintiff would find the keys, the whole 12*l.* As he had made unconditional promises to pay before discovering the keys were wanting, judgment was given against him for the full amount.

FORMULE OF SECRET MEDICINES.

(Continued.)

The Formule given below are translated (by special permission of the author) from a German collection compiled by Mr. Edward Hahn, Apotheker. The names following most of the Formule are those of the authorities quoted for the analysis. The weights are almost invariably given in metric denominations. A gramme is equivalent to 15½ grains. The prices quoted are the nearest English equivalents to the original retail price.

HEIL- UND ZUGPFLASTER—HEALING AND DRAWING PLASTER (Lampert). The box contains 38 grammes. The clear brown plaster is prepared by heating together 5 parts simple lead plaster, 3 parts yellow wax, and 1 part tallow until they turn brown; then adding 1 part turpentine, and pouring out.—*Wittstein.*

HEIL - UNIVERSAL - SALBE—UNIVERSAL HEALING SALVE.—Announced by Th. Brugier, of Carlsruhe, as "a very powerful remedy for dry and moist tetters, salt flux, and cutaneous eruptions of all kinds." An ointment of corrosive sublimate, which has often, by its irritating properties, done more harm than good. A small pot, 3*s.* 2*d.*

HEIL - WUNDPFLASTER—WOUND-HEALING PLASTER (Georg Krätz, Executioner, Zeitz).—Consists of *pix nigra*, *resina pini*, and *emplastrum fuscum*.—*Hager.*

DR. PEDRO RITSIO'S HEILVERFAHREN—RITSIO'S HEALER (Apotheker O. Siemering, Tilsit).—For all fluxes in men or women, for chronic catarrh, and all other weaknesses. 34 grammes of a powder consisting of powdered iron, 5 grammes; cinnamon, 5 grammes; sodium bicarbonate, 12 grammes; milk sugar, 12 grammes; and anise oil, 1 drop. 6*s.*—*Schädler.*

HEILUNGIANG'S THIERHEILPULVER, ARABISCHES UND ASIATISCHES—HEILUNGIANG'S ARABIAN AND ASIATIC VETERINARY HEALTH POWDER (J. Bittner, Gloggnitz, and F. Wilhelm, Neukirchen).—A mixture of gentian, 10 parts (including a little wormwood); Glauber's salts, 6 parts; marl, 2 parts; sulphur, 2 parts. 250 grammes, 9½*d.*—*Hager.*

HENRIETTENSALBAM—HENRIETTA'S BALSAM.—For toothache and scorbutic affections of the gums. Said to be prepared by the extraction of the Caroba *doguidea* with three times its quantity of spirit.—*Wittstein.*

ROCHE'S HERBAL EMBROCATION FOR THE HOOPING COUGH (London).—2·5 grammes *asafoetida* are digested for some hours with 60 grammes olive oil; the oil is decanted and mixed with oil of caraway and turpentine, of each 2 grammes; bergamot oil, a few drops. 60 grammes, 4*s.*—*W. Müller.*

HJERNE'S TESTAMENT.—A popular remedy much esteemed in Finland, and used with brandy or spirit as a stomachic elixir. The recipe is as follows:—Gentian root, chopped small, 30 parts; ginger, 6 parts; bruised aloes, 30 parts; bruised myrrh, 4½ parts; crude potassium carbonate, 9 parts; *Fuligosplendens*, 9 parts; reduced to a fine species.—*Hager.*

HOLLÄNDISCHE TROPFEN—DUTCH DROPS.—For lung affections, and externally for sores, &c. Prepared from turpentine oil, 3 parts; sulphur, 1 part; linseed oil, 1 part.—*Val.*

"**HOLLAND COMPOUND**," for softening water, is a solution of about 5 parts sodium silicate (water-glass), with 1 part sodium carbonate, in 5 parts water.—*Hager.*

HONIGBALSAM.—HILL'S BALSAM OF HONEY.—Tolu, 10 parts; liquid storax, 2 parts; opium, 1 part; honey, 100 parts; rectified spirit, 300 parts; digest and filter.—*Hager.*

THE HONIGTRANK—HONEY-DRINK—of the Original Sanitary Adviser, Karl Jacobi. "It heals all incurable diseases," as the insane specification affirms. In spite of this stupid statement the sale is so considerable that the Original Sanitary Counsellor employs 20 men at his counter. The drink is of seven kinds, only slightly differing from one another, and always adapted to the disease. The main ingredients are a decoction of tamarinds, with sugar, cream of tartar, spirit, and raspberry juice. No. 1 contains, besides, some decoction of frangula; No. 7 some valerian and myrrh. 350 grammes, 1*s.* 6*d.*—*Schädler and Hager.*

DR. KLIPPEL'S HOUSE PRESERVATORY (Oscar Hornig, Freistadt, Lower Silesia).—For mould in houses. A dark brown stinking fluid, consisting of a mixture of 10 parts crude carbolic acid and about 3 parts soda lye. 500 grammes, 1*s.* 3*d.*—*Hager.*

HOYT'S HIAWATHA HAARBALSAM OR HAIR RESTORATIVE (sold by David Wright, 112 South Street, New York).—A 1 per cent. solution of silver nitrate in ammonia.—*Chandler.*

HÜHNERAUGENPFLASTER—CORN PLASTER (Keilholz).—Galbanum, 24; black pitch, 12; lead plaster, 6; sal ammoniac and verdigris, of each 1; finely powdered cantharides, 4.—*Hager.*

HÜHNERAUGENPFLASTER—CORN PLASTER (Dr. Smith).—Felt rings spread with sticking-plaster.

HÜHNERAUGENPFLASTER (H. Thieme).—Consists of mercury, mercuric oxide, resin plaster, and soap.—*Wittstein.*

HUILE DE FLORIDE is olive oil perfumed. 60 grammes, 4*s.*

HUILE IODÉE DE BERTHÉ—BERTHÉ'S IODISED OIL.—A slightly-coloured solution, made with the aid of heat, of 1 part iodine in 200 parts almond oil.

HUILE IODÉE DE PERSONNE.—A solution of 1 part iodine in 150 parts almond oil, prepared like Berthé's.

HUILE IODO-PHOSPHORÉE DE BERTHÉ—BERTHÉ'S IODO-PHOSPHORISED OIL.—Huile iodée de Berthé, 100 parts; oleum phosphoratum, 1 part; mix and warm.

HUILE DE MARRONS D'INDE, HUILE ANTIGOUTTEUX GENEVOIS—HORSE-CHESTNUT OIL, GENEVOIS'S ANTI-GOUT OIL (Genevoix).—The meal of horse-chestnuts is extracted with ether, the ether distilled, and the oil remains. The horse-chestnut oil of commerce is another fatty oil.

HUILE DE PROTOIODURE DE FER—OIL OF FERROUS IODIDE (Gille).—Contains a little iodine, but not a trace of iron.—*Rabouadin.*

HUNDSWUTH, WASSERSCHEN.—For rabies or hydrophobia, and rinderpest. "Anton Patkiewicz' unfailing and thoroughly-tested remedies for the above diseases." This is the title of a *brochure* of 24 pages, in which the certificates of officials are not wanting. The hydrophobia cure, which Patkiewicz will send on receipt of 6*s.*, is contained in two glasses. In No. 1 are found 3 tablets, weighing 3 grammes each, wrapped in waxed paper, and marked 1, 2, and 3. They are yellowish white, and seem to be made of wheat-meal, baked with a little sugar and some fatty substance, which, it seems, is oil boiled with the herb of *Anagallis arvensis* (pimpernel) and the seeds of *Euphorbia lathyris* (caper spurge). The other glass contains a salve of lead plaster, turpentine, and an oil which has probably been boiled with pimpernel. These remedies will make the excision and cautery of the bites superfluous. The tablets are to be taken every half-hour, fasting.—*Hager.*

HYMETTIN (bought in Berlin in 1870).—Injection for gonorrhoea. Gum arabic, 10 grammes; alum, 2 grammes; zinc oxide, 5 grammes; eau de Cologne, 2 grammes; water, 200 grammes. At a later date it was found to consist of honey, 7·5 grammes; zinc sulphate, 2·5 grammes; eau de Cologne, and water. 4*s.*—*Hager.*

DR. LACROIX'S HYPNOPHOR (G. Poenicke, Leipsic).—For sleeplessness. Raspberry juice, 50 parts; syrup, coloured with cochineal, 100 parts; tartaric acid, 2 parts. 125 grammes, 3s.—*Hager*.

JAPANESE BRONZE may be imitated by the following mixture:—Gold, 1 part; mercury, 3 to 9 parts; tin, 33 to 65 parts; copper, 1,272 parts. European bronze ordinarily consists of tin, 1 part; and copper, 8 parts; and contains, besides, when needful, an alloy of lead and zinc. The Colossus of Daibuts at Narra, near Kioto, contains, in avoirdupois pounds, gold, 500; tin, 16,827; mercury, 1,954; copper, 986,000; total, 1,005,361 lbs.

ICHTHYOCOLLE FRANCAISE is prepared from blood fibrine and tannic acid.

NOTES FROM GREECE.

By PROFESSOR XAVIER LANDERER, ATHENS.

Orange-flower Water.

AQUA NAPHÆ is prepared throughout the Orient from the flowers of the *Citrus aurantium*. It is known as *anthoneron*, or "flower water," while rose water is called *rhodostamnon*. Both these waters are prepared in large quantities in the island of Chios, and are sent thence to Europe by way of Marseilles, Trieste, &c. In Greece the water prepared from the orange flowers is sophisticated with *mythoneron*, which is a water distilled from the small and highly aromatic leaves. The Jews living in the Tsifuth, or Jews' Quarter of Thessalonica, are engaged in the sale and in the falsification of many similar Eastern products, as opium, with grapes, with salep powder, and salep powder with bean-meal. To this *mythoneron* they add some drops of oleum neroli and some salt, and then bring it into the market as *anthoneron*. It is very difficult to distinguish this article from the true orange-flower water. The *anthoneron* is also counterfeited without the use of *mythoneron* by simply dissolving oleum neroli in a very weak solution of salt. The much-liked *anthoneron* is sold by retailers and travelling merchants in small straw-covered flasks.* They recommend it as a *Farmakon antispasmodicum*, "Eji Hadsch Turantz Su," that good remedy, orange-flower water. In Chios the okka sells for 70 or 80 lepta or a drachma (a drachma = 100 lepta = 8½d.).

A Noble Industrial Enterprise for English Friends.

Of the highest importance to all Greece, would be the founding of a large wine establishment, which, in the month of September, would buy wine-must for low prices, and convert it into wine. The product could be retailed in England three or four months later as costly Greek wine. During the present year a mpotza (5 pints) of all kinds of must could have been bought for 2, 3, or 4 kreuzers (a kreuzer is a third of a penny). The poor people could not find casks, but tried to keep it in clay vessels called *pitharien*. Hundreds of thousands of okkas of this superfluous must were boiled down to the syrup called in Turkish *bctmise*, and used as a sweetening material for preserving other fruits, or for strengthening other weak wines. An okka of this concentrated must sold this year for 2 or 3 drachmas. Layers of almonds or walnuts strung on threads are often immersed in this syrup, and when left for several months they form an agreeable and nourishing side-dish. They are called *tutzukea*, or "wine sausages." Another dish frequently prepared from must is the so-called *mustaleuria*, from *mustum* and *aleuron*, "meal." The must is boiled to a strong jelly with fine meal, almonds are added, and the whole is completely dried in a baker's oven. The surface is strewn with sesame seeds; it is then cut in pieces, and kept in boxes.

This preparation turns white after a few weeks from the crystallisation of sugar on its surface.

* A rough sketch accompanying the manuscript shows that the flasks resemble those used for salad oil, but their necks are twice as long.

THE CHEMICAL SOCIETY,

Thursday, January 16.

DR. GLADSTONE, President, in the chair.

The following papers were read:—

"On the Action of Isobutyric Anhydride on the Aromatic Aldehydes," by W. H. Perkin. The author has studied the action of isobutyric anhydride on cuminic aldehyde, hydride of benzoyl, cinnamic aldehyde, paroxybenzoic and anisic aldehydes. The bodies formed are respectively— β . isopropylbutenylbenzene, β . butenylbenzene, butenylcinnamene, parabutenylphenol, and β . parabutenylanisol.

"On Two New Methods for the Estimation of Minute Quantities of Carbon, and their Application to Water Analysis," by Drs. Dupré and Hake. The first consists in burning the substance in a current of oxygen in a combustion-tube, with oxide of copper, absorbing the carbonic acid in a Pottenkoffer tube with baryta water, filtering off the barium carbonate with great care, converting into chloride, then into sulphate, and weighing. In the second, the carbonic acid passes into a 2 per cent. solution of basic acetate of lead, and the turbidity compared with that produced by solutions of carbon of known strength in a Mill's colorimeter.

"On Stannic Ethide," by Dr. Frankland and Mr. A. Lawrence. By treating zinc ethyl with successive quantities of fused stannous chloride, the authors have prepared the stannic ethide with great facility; they have also examined its properties, and specially investigated the action of sulphurous acid.

"On Aurin," by R. S. Dale & C. Schorlemmer. The authors have prepared pure aurin with great care, and confirmed the formula which they have already assigned to it. They have also studied ammonia aurin, tetrabromaurin, and the compounds formed by aurin with acetic, sulphuric, hydrochloric, and nitric acids.

"On the Derivatives of Diisobutyl," by W. Carleton Williams.

"On the Action of Chlorine upon Iodine," by J. B. Hannaz. The author confirms his previous conclusion—viz., that a body containing one atom of iodine and four atoms of chlorine does not exist.

Thursday, February 6.

DR. GLADSTONE, President, in the chair.

This meeting was occupied by the discussion "On the Processes for Determining the Organic Purity of Potable Waters," a paper read by Professor Tidy some time since. Dr. Frankland opened the discussion, and criticised at some length the objections urged by Professor Tidy against his method of estimating the carbon and nitrogen in a water residue by combustion. The discussion was continued by Mr. Wanklyn, Mr. Kingzett, Professor Bischof, Dr. Vocleker, Dr. Grosjean, Dr. Dupré, Mr. W. Thorp, and Dr. Hake. Professor Tidy then briefly replied, and the proceedings terminated with a unanimous vote of thanks from a crowded meeting to Professor Tidy for his paper.

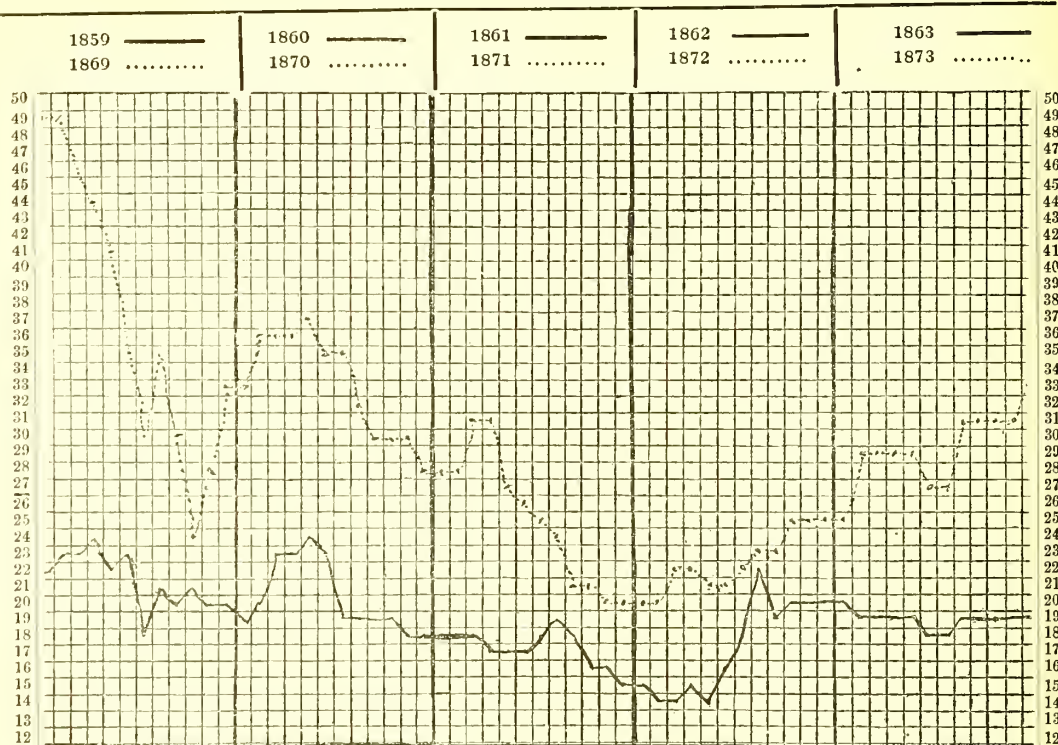
Personalities.

DR. MUTER has been chosen President of the Society of Public Analysts in place of Dr. Dupré, whose term of office had expired.

THE STUDENTS of the Central School of Chemistry and Pharmacy lately presented their teachers, Messrs. Luff and Woodland, with a handsome testimonial, consisting of an eseritoire and a timepiece; the presentations, which were accompanied by an illuminated address signed by a large number of students, were made at the School amid much enthusiasm on the part of the students.

THE WILL AND CODICIL of Mr. James Baiss, late of Jewry Street, drug merchant, and of The Firs, Brenchley, Kent, who died on August 16 last, was proved on January 10 by Mrs. Ann Baiss, the widow, Mr. Sydney S. Baiss, the son, and Mr. Robert Monckton, the executors, the personal estate being sworn under 16,000l. The testator leaves to his wife a pecuniary legacy of 100l., and all his wines, liquors, and consumable store, absolutely; and for life or widowhood the use of his furniture, and the income of the residue of his property. On her death or second marriage the residue is given to all the children equally.—*City Press*.

THE FLUCTUATIONS IN OPIUM



THE accompanying diagrams represent the monthly variations in the price of opium during the past twenty years. The course of the market may be followed by reading first the solid line throughout both diagrams, and continuing with the dotted line. The opium market is subject to many quite legitimate causes of fluctuation, but it is also peculiarly liable to

THE ABANDONMENT OF THE SHEPPERLEY CASE.

THE *Lancet* says the Apothecaries' Society is, doubtless, well advised in abandoning the case against Shepperley. It was a badly-managed business from the first, and, as a test case, practically useless. The illness of the suppositions patient had no real existence. The druggist saw through the trick (tricks are always immoral and deserve to be "seen through"), and he recommended a *placebo*. In short, it was not a *bona-fide* case of prescribing, and nothing would be gained by carrying it further. At the same time, it should be distinctly understood, and, to that end, expressly stated, that there is not the slightest intention of waiving the question at issue between the Chemists and Druggists' Association and the Apothecaries' Society, and which it was the purpose of this case to raise. If the Apothecaries' Society failed in its mission to defend the medical profession by enforcing the provisions of the Apothecaries' Act, it would lose the last vestige of a claim to recognition. The Medical Act of 1858 was framed on the presumption that the Act of 1815, as amended, would serve for all purposes of defence against the encroachment of the chemists. For the sake of that Act, mainly, added to some sentiment of gratitude to the old company (as it was then not too proud to call itself) for services rendered to medical education, the Society was tolerated, and even admitted to share the *dignity* of representation in the Medical Council—whatever that may amount to! If it is not prepared to keep the back door of the profession against intruders of the class who practise nefariously while the guardians of the Act of 1858 defend us against the pretenders who assume titles to which they have no claim, the Society will speedily cease to exist.

[We are not surprised that those who a little while ago all-hailed the Shepperley case as a test of the legal right of chemists to prescribe over their counters should now be eager to show that it tested nothing. If it did no more, it tested public opinion, as the Apothecaries' Society is not likely to forget. The statement that the Medical Act of 1858 was framed on the presumption that the Act of 1815 would serve as a defence against the encroachments of chemists is a fact known only to the *Lancet*. We have reason to know that the framers of that Act were pressed to include in it some legislation against chemists, but they declined to risk more opposition than that which they were already sure of.—ED. C. & D.]

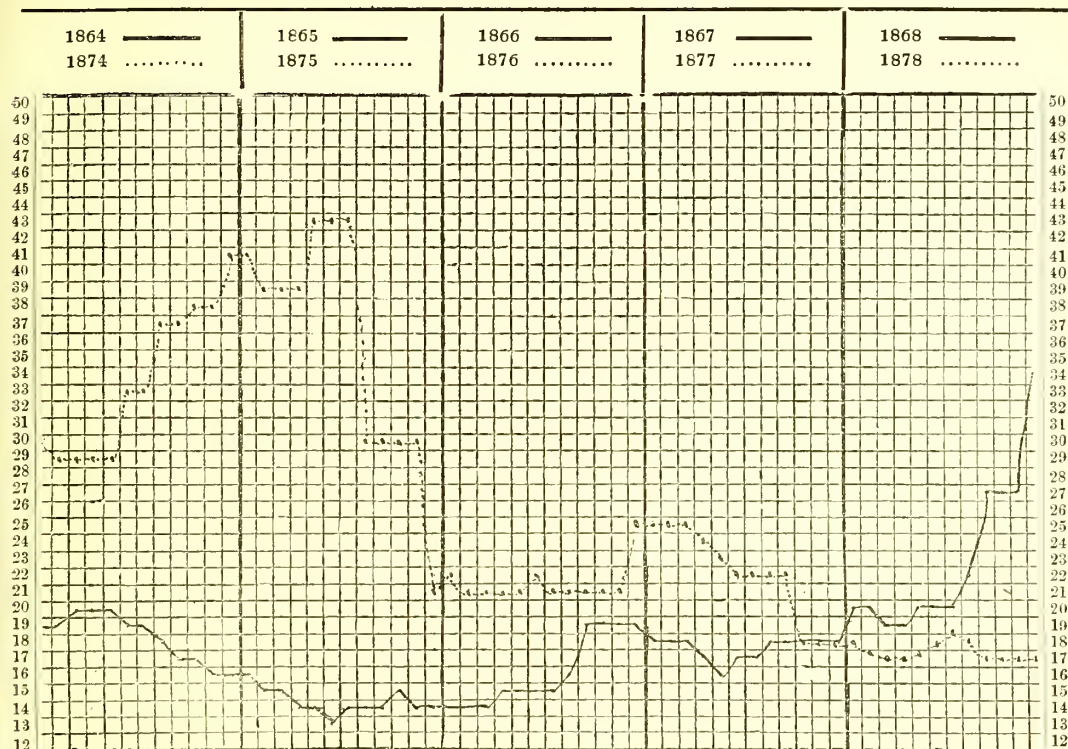
Foreign Items.

HONG KONG.—A disastrous fire broke out in Hong Kong on December 25. Large quantities of opium and other merchandise were destroyed.

DAMAR.—Java exported 12,052 piculs of damar in the year ending June 30, 1877, and 12,079 piculs in the previous 12 months. The picul is 135 lbs. 10 oz.

QUININE IN CYPRUS.—A correspondent of the *Daily News*, who has lived so long in Cyprus that he has almost forgotten his own language, says:—"The country people do not take much medicine, simply because they cannot procure it. In the towns apothecaries sell adulterated drugs; pure quinine can seldom be obtained, magnesia being used. Many of the poor people believe themselves cured by incantations and priestcraft."

DURING THE PAST TWENTY YEARS.



the influence of speculation. The frequency with which the quotations rise or fall in the early months of the year, before the information respecting the new crop gets accurately known, testifies to the varying success of "bulls" or "bears."

BARBARY GUM.—Only 900 cwt. of brown barbary gum was exported from the port of Saffi, Morocco, in 1877. This is much less than in previous years. All of it came to Great Britain.

EGYPTIAN OPIUM.—From all Egyptian ports in 1877, 1,223 okes (about 3,300 lbs.) of opium, valued at 2,080*l.*, were exported. Of this quantity Austria purchased 95, France 320, Britain 756, and Italy 52 okes. Turkey and Greece, which purchase many things from Egypt, take no opium.

PERUVIAN DRUGS.—The gross estimate of exports from the port of Arica during the year ending December 31, 1877, mentions the following articles:—Peruvian bark, 5,056.05 quintals, valued at 67,414*l.*; bismuth, 968.84 quintals, valued at 4,036*l.* 2*s.* 9*d.*; cocoa (*i.e.*, coca), 174.88 quintals, worth 1,165*l.* 17*s.*; ratania, 8.2 quintals, valued at 95*l.* 13*s.*

SULPHUR IN SICILY.—A company has been formed to acquire, work, and develop sulphur and other mines in the island of Sicily. It is registered with a capital of 10,000*l.* The directors are empowered to adopt an unregistered agreement of September 10, 1878, between the Sicilian Sulphur Mines Company (Limited) and others, relating to the leases or concessions of the Gibellini Mines, from which the new company takes its title.

HAYTIAN PLANTS.—Mr. Langston, of the United States Legation at Port-au-Prince, in Hayti, in a report states, on the authority of Dr. J. B. Delroux, "the most learned and scientific man of this republic," that there are not less than 2,000 varieties of plants in the country, but that not more than 600 have been examined and classified. A variety of *Datura*, described as "*Stramoine epineuse*," is stated to possess wonderful narcotic properties.

PERUVIAN CINCHONA BARKS.—The Peruvian Government has recently issued new regulations for the collection of cinchona bark. The following is a summary:—Article 1 permits the collection of cinchona bark (*Cascarilla*) in all the "departamentos" of the Republic, except in the hilly regions of Sandia and Tambopata in the department of Sandia, which yield *Cascarilla calisaya*. Article 2 forbids the collection of bark except according to the rules already established. Article 3 commands the Prefect of the Department of Puno to provide a commissioner with a permanent staff of men to prevent the cutting of *Cascarilla calisaya* on the hills of Sandia and Tambopata. Article 4 instructs the prefects of all departments in which the *Cascarilla* grows, Puno being specially mentioned, to forward to the Bureau of the Secretary of State plants and seeds of all the different varieties of the tree, with the popular names by which they are known.

COUNTER PRACTICE IN FRANCE.—The law against the illegal exercise of medicine in France is very severe, but if it were generally enforced pharmacy would be impossible. Lately a man had a slight burn, and his wife fetched from a pharmacien a few sous worth of "eau blanche," or lead lotion. The man died a few days after, according to the testimony of the physician who attended him, of tetanus. The Government medical officer who had to register the death reported the cause of death to have been cerebral hemorrhage. The widow, however, took the fancy that it was the lotion of the pharmacien which had killed her husband, and she consequently laid a charge against him. The lotion was analysed and the case came on. The evidence was too weak to convict the poor pharmacien of manslaughter, but the Court fined him 625*f.* for the illegal exercise of pharmacy!

PHOSPHATE IN CANADA.—An important discovery of rich deposits of phosphate of lime has been made in Ottawa County, Canada. The Deputy of the Ministry of Public Works has visited the place, and has brought thence some remarkably rich specimens. The value of the land in the neighbourhood has risen immensely, and quite a "rush" has taken place. It is also reported that the Ritchie phosphate mine, on the river Lievre, has been bought by an English company for 15,000*l*.

A PHARMACIEN TRIED FOR MURDER.—Towards the end of last year a pharmacien of Rome, named François Amato, was tried at the Assizes of that city on a charge of having poisoned a certain priest named Father Grossi by hemlock five years previously. It seems hardly possible, but the report from which we take our facts declares that the accused had been detained in prison through all those five years! The trial lasted all through a day and a good way into the night. The questions submitted to the jury were, Did Father Grossi die of poison? and, Did Amato administer the poison? The prisoner, who had borne himself with remarkable courage through all the five years and during the trial, broke down during the interval while the jury were absent. When they returned he had to be supported by the officers of the court. The first question was put, and the foreman answered, No! Then the President said to the prisoner, "Amato, the jury not only acquits you, but finds that no crime was committed. You are free!" And so the poor man, after five years' punishment for nothing, regained his liberty.

CAMPHOR IN CHINA.—Mr. B. C. George Scott, H.M. Acting Vice-Consul at Tamsui, gives some interesting notes on the camphor trade of China in his report on the commerce of the ports of Tamsui and Kelung, on the island of Taiwan. The export of this product, which had shown a considerable falling-off in the returns for the two previous years, advanced to a higher point in 1877 than had been attained for many years past. With the exception of tea it is by far the most valuable export of the district, representing as it does in the Customs returns a value of some 23,710*l*; coal, which comes next, only showing a value of 19,630*l*. The trade in camphor presents one or two features of some interest. Formosa is one of the few districts in the world producing camphor; the others being Japan and some parts of the Malay Archipelago. The tree from which it is obtained (*camphora officinarum*) is said not to be known on the mainland of China; at any rate, camphor is not extracted from it there. The camphor-producing tree of the Malay Archipelago differs from that growing in Formosa and Japan, and in addition to the crude camphor produces a valuable medicinal gum known as camphor baroos in the Chinese import tariff, the duty on which is no less than 1 to 3 taels per catty, or 5*s*. 10½*d*. per lb. The Formosan tree does not produce this gum. The entire produce of the year was, with the exception of about 28 piculs, sent direct to Hong Kong for transmission to other foreign countries, chiefly to Great Britain. Camphor is the only commodity, either of import or export, for which the Transit pass system is made use of at Tamsui. The amount brought from the interior during the year under Transit pass was only 2,026.78 piculs, and this represents as nearly as may be the shipments on foreign account, the rest of the trade being confined entirely to Chinese. A hydraulic press has lately been set up by one of the foreign firms trading here for pressing the camphor before shipment. Hitherto, owing to its being comparatively loosely packed, and containing a large percentage of water absorbed during its sublimation from the wood, the loss by evaporation between Tamsui and Hong Kong was very large. The Customs allow for an estimated decrease of 5 per cent.; in former years as much as 11 per cent. was the allowance. But it is said that the loss in the camphor submitted to the hydraulic press is much less than the Customs allowance, and that the new system of packing is attended with most beneficial results. At present Chinese shippers have not taken advantage of the press, preferring for some inscrutable reason the old method of packing; they are, however, far too much alive to their own interest to continue to do so, and before long, no doubt, the bulk of the camphor shipped will be packed by the press introduced by the enterprising firm alluded to above at a very considerable outlay.

PERUVIAN BARK.—Vice-Consul Chambers' "Report on the Trade and Commerce of Guayaquil for the year 1877" states that the export of Peruvian bark "shows a large increase of 4,519 quintals over 1875 and 5,697 quintals over 1876. This, doubtless, was caused in some measure by the detention of a considerable amount in the interior, owing to the interrupted communication between the provinces where this article is obtained, and Guayaquil, during the troubled times from September to December, 1876, thus leaving a part of the produce of that year for exportation in 1877." The price per quintal at Guayaquil in 1876 was 70*s*.; in 1877, 68*s*. The total amount exported in the latter year was 9,882 quintals, valued at 29,646*l*.



BREACH OF TRUST.

At the Central Criminal Court on January 15, Julian Loire, 29, nephew to Mr. Jules Denoual, medical capsule maker, New Cross Road, was tried on a charge of embezzling various monies belonging to his uncle, by whom he was employed. He had been entrusted with the management of the business, Mr. Denoual living usually in Normandy. Some bad speculations and mistrading by the prisoner had come to light previously, but this had been overlooked. Afterwards, however, the prisoner had absconded, and then it was found that he had received sums of money for which he had never accounted. The prisoner, who was undefended, said if he had received those sums he had expended them in the management of the business. The jury found him *Guilty*, but recommended him to mercy on the ground that the prosecutor ought to have exercised a more strict supervision of the accounts. The Recorder sentenced the prisoner to six months' imprisonment.

FRUIT SALT.

AN action was concluded last month in Vice-Chancellor Bacon's Court, in which Mr. Eno, the proprietor of Eno's Fruit Salt, was the plaintiff, and a Mr. Stephens, a chemist at Hereford, was the defendant.

The plaintiff had previously obtained an interlocutory injunction against the defendant, and he now sought to make the same perpetual, prohibiting the use of the terms "fruit salt," "fruit balm," "fruit powder," on defendant's labels. He also objected to the registration by defendant of a trade-mark involving a bunch of grapes, which was a part of plaintiff's trade-mark. Application was also made to restrain the defendant from publishing a circular worded similarly to that of the plaintiff, and for an account for damages.

Sir Henry Jackson, Q.C., and Mr. Cutter appeared for the plaintiff, and Mr. Hemming, Q.C., and Mr. Giffard represented the defendant.

Evidence was tendered to the effect that the defendant had used the term "vinous fruit salt" since the injunction. The defendant's circular was also read, and it corresponded almost exactly with one issued by the plaintiff.

Dr. John Nicholson Fleming, son-in-law of plaintiff, examined by Mr. Cutter, said he had managed the plaintiff's business for the last four years. He verified the wrappers used by the plaintiff, and a bottle of the preparation as sold. He purchased one or two bottles of defendant's preparation in December, 1877, and two in March, 1878. The bottle produced was one purchased in December, 1877; it was then wrapped up in the chocolate-coloured wrapper produced, and around it was a circular. Of the two bought in March, one was opened at the solicitor's office, and

had the words "fruit salt." The other one was opened in Court, and had not these objectionable words. Cross-examined by Mr. Hemming: He bought all these bottles at Condy's. The witness, when asked what fruit it was prepared from, claimed the protection of the Court, and his Lordship said he was not obliged to answer. The witness said it was made from fruit, but he declined to say what. Effervescing mixtures had been in use for many years. He did not know that tartaric acid and bicarbonate of soda were invariably used to produce effervescing mixtures; he would not say whether that was what he used unless compelled. [The Vice-Chancellor did not think the question could be put.] He could not give the exact composition of seidlitz powders. The statements in the circular were true; was quite sure it was "the best and simplest preparation for regulating the action of the liver that had ever been invented," and so on with the other statements. He had tested this preparation on himself, and other saline preparations: found others depressing and this exhilarating. Had not tested its curative effects in gout on himself. Was not prepared to say that the fruit salt would remove arsenic from the blood. He knew of the correspondence in August, 1877, between plaintiff and defendant; he believed the defendant then undertook not to use the words "vinous fruit salt," and that he pasted a label over those words. The label on the bottle purchased in December appeared to have had something pasted over it, which had been taken off.

Re-examined: He knew that many medical men recommended this preparation to their patients.

Professor Hartley, examined by Sir H. Jackson, was Lecturer and Demonstrator of Chemistry at King's College, member of the Council of the Chemical Society, &c., said The term "fruit salt" did not designate any chemical substance; it was a purely trade term. Cross-examined: Knew that effervescing draughts were very common; they were usually made of tartaric acid and bicarbonate of soda; cream of tartar was a product of the grape, and from it tartaric acid was made; tartaric acid was essentially the grape acid.

The defence was directed exclusively to the support of the defendant's claim to register the trade-mark which he had submitted, and it was maintained that it was not possible to make a mistake between the two.

The Vice-Chancellor said he would not trouble the plaintiff's counsel. He had been much astonished that after the counsel for defendant had insisted on having all the evidence previously given reproved, he had called no witnesses. The evidence showed that defendant had repeated, in spite of his promise, that which the plaintiff complained of. The case was entirely without defence or excuse. The defendant states that nobody has been deceived, but his intention to deceive was not contradicted. This raised the question which had been tried along with the other, whether there was a title to register the trade-mark or which defendant proposed to apply. That depended on the words of the Act of Parliament, "so resembling as to be calculated to deceive." He (the Vice-Chancellor) was invited to lay these two devices side by side, and because they were not identical and there were great differences in their external appearance, to say they were not calculated to deceive. In his judgment it had been plainly calculated by the defendant, meant and contrived by him to deceive any person not vigilant enough, not only by sight, but also by ear, to detect at once the difference between "Eno's" and "Vinous," the sounds being in one mode of pronunciation much alike. Could any living man doubt the intention? The world is wide, and all things in the animate and inanimate world are open to the defendant as a device to distinguish his goods from others. There was much dissimilarity between the stem of the vine with a bunch of grapes and some leaves with the words "vinous salt," which the defendant proposed to register, and the plaintiff's trade-mark, which was a bunch of grapes. But the Registrar was bound to look at the whole case, and was not to be baffled by any mere similarity or dissimilarity. To his mind, there was clearly sufficient resemblance to answer the strictest words of the statute, and a resemblance carefully and intentionally calculated to deceive. The injunction must, therefore, go in the terms in which the bill prayed for it, and he must come to the conclusion that the defendant was not entitled to register the

device of a branch of a vine with a bunch of grapes, and a Latin motto and the words "vinous salt."

Sir H. Jackson: Of course, my Lord, I must have costs.

The Vice-Chancellor: You must have costs of both.

THE STORES SQUABBLING.

The Army and Navy Co-operative Society (Limited) came before the Master of the Rolls on January 16 to ask for an injunction to restrain the Junior Army and Navy Stores (Limited), a new company, from using a title so similar, it was alleged, that customers were likely to be misled. The Master of the Rolls refused the application in very decided terms. First, he thought no sensible person could mistake the one establishment for the other; secondly, he ruled that no one could have an exclusive title to the term "Army and Navy," which were not the property of any society; and, thirdly, as the plaintiffs proposed only to deal with their shareholders or with persons to whom tickets had been furnished, they could not be affected by any errors which the public might make. The motion, he said, was baseless and groundless, and he refused it, with costs.

EMBEZZLEMENT.

At Bow Street on February 5, Henry Taylor, about 26 years of age, was brought before Mr. Vaughan charged with robbing his employers, Messrs. G. Salter & Co., brushmakers, Red Lion Square, Holborn. Mr. Salter stated that on Monday evening he accidentally saw an entry of some cash in one of the ledgers in the handwriting of the prisoner, which aroused his suspicions. On the following morning he demanded an explanation, when Taylor confessed that he had appropriated the money he had received from a customer, and posted the amount in the ledger to avoid detection. He begged for mercy, and admitted that he had for the last three years been systematically robbing the firm by taking away goods and falsifying his accounts.

The magistrate in severely commenting on the prisoner's conduct stated that it was one of the worst cases of ingratitude ever brought before him, as he had evidently been treated with great consideration and kindness by his employers during the 11 years he had held his situation. He passed sentence of six months' hard labour, which at the urgent appeal of Mr. Salter was commuted to four months.

MILK OF SULPHUR REDIVIVUS.

A BATCH of milk of sulphur cases came before the Guildford magistrates on the 3rd inst., one grocer and two chemists being summoned for having sold as milk of sulphur an article which was not of the nature, substance, and quality demanded by the purchaser.

The case against Mr. J. W. Bentley, grocer, was taken first. Mr. Arthur H. Angell, of Southampton, borough analyst, gave evidence that what had been bought as "milk of sulphur" was really "sublimed sulphur." If purchased by the cask sublimed sulphur would run about 16s. 6d. per cwt., while precipitate or milk of sulphur would cost 38s. for the like quantity, and even that would not be a pure article. There was no lime in the sample, and the article was not a medicinal preparation. Any grocer upon being asked for the medicinal preparation of sulphur should refer the intending purchaser to a druggist.

By Mr. Sells (a magistrate): He believed there was a law which prohibited grocers from selling drugs.

Cross-examined: He regarded himself as the representative of the interests of the "Food and Drugs Acts" in that borough. He suggested that the grocers, as well as the chemists, of the town should be called upon and asked for the "milk of sulphur." There was neither lime, sulphate of lime, nor gypsum in pure "milk of sulphur." He was not aware that the term "milk of sulphur" was eliminated from the "British Pharmacopœia" in the last edition of 1867, which he had referred to.

Re-examined: He was satisfied that "milk of sulphur" and "precipitate of sulphur" were synonymous terms.

For the defence it was shown that the article had been sold by an assistant who did not know exactly what milk of sulphur was, but who supposed the purest kind would be sure to do.

The magistrates resolved to hear the other cases before deciding.

Mr. Frederic Wheeler, chemist, was next similarly charged. He, too, had supplied sublimed sulphur. He kept milk of sulphur in his shop, but considered that if he had supplied it he would then have been liable to prosecution for selling an article containing lime. In this case 2½*d.* had been charged for what the grocer had only charged 1*d.*

Lastly, Mr. E. Waller Martin was charged, but in his case the analyst stated that the article supplied was milk of sulphur, containing 7·8 per cent. of sulphate of lime. In cross-examination by the defendant, Mr. Angell admitted that the Pharmacopœia gave no formula, but he read extracts from Attfield's "Chemistry," Muter's "Chemistry," and Ure's "Dictionary," and said he placed those authorities collectively before the Pharmacopœia of 1867.

By Mr. Sells: It was not a bad case of adulteration, there being only a very small proportion of lime in the article.

Mr. Sells said he had medical authorities dating back to 1745, showing lime to be recognised as a component part of "milk of sulphur."

Mr. Angell observed that that was before the process of precipitation by hydrochloric acid was known.

Mr. Sells said it was so recognised down to a very recent period, and he asked Mr. Angell if he was not aware that it was a fact that the older medical men in the present day preferred the old preparation of sulphur with a small quantity of lime in it?

Mr. Angell answered that he was not aware such was the fact.

Mr. Sells said he was old-fashioned enough as a medical man to prefer the old preparation, and he read an extract from the writings of an eminent surgeon of Liverpool who held the like view.

Mr. Angell, in answer to Mr. Sells, said there was nothing to prevent the preparation being made in that way still; and, in answer to Mr. Haydon, said that any person supplying "precipitate of sulphur" when asked for "milk of sulphur" would not be substituting an inferior article, but in supplying "sublimed sulphur" they would be giving an inferior article to "milk of sulphur."

Mr. Martin, in defence, produced a report of the Runcorn case, in which the Justices of Quarter Sessions, including Sir Hardinge Gifford, the Solicitor-General, had quashed a conviction obtained in a case similar to this one.

The Bench then retired, and after a short deliberation the Mayor announced that they had given the cases serious consideration, and as a result they found that in Mr. Waller Martin's case the article was sold as was demanded by the purchaser, and the charge would therefore be dismissed; in the cases against Mr. Bentley and Mr. Snoxell (another grocer, whose case had been previously heard) the Bench considered they had acted wrongly, but they had charged a fair price for the article sold, and believing that a mistake only had been committed, they felt that justice would be met by the nominal fine of a farthing, which would be inflicted; in the case of Mr. Wheeler it was admitted that quite a different article had been knowingly supplied by the defendant to what was demanded, and a fine of 20*s.* and costs would be inflicted.

HEAD v. COCKING.

THIS case came before Vice-Chancellor Sir Charles Hall on February 11, and was a partnership action, in which the plaintiff asked for an injunction to restrain the defendant from manufacturing behind his (the plaintiff's) back certain felt medical bandages and splints for spinal diseases, according to the defendant's patents, and which the partnership was formed to deal with; and it is also asked that a receiver of the partnership assets should be appointed. There was a counter motion by the defendant to stay proceedings in the action, and to refer the question in dispute in the manner provided for by the Common Law Procedure Act. Two patents were taken out by the defendant, John Cocking, for improvements in splints, medical bandages, &c., in 1871, and those patents were sold to a company absolutely. The company was wound-up, and the plaintiff, Head, purchased the patents from them. He afterwards entered into a partnership agreement with Cocking, the original inventor,

by which the letters patent were to be dealt with for the mutual benefit of the two partners. The plaintiff was to provide the capital at an agreed rate of interest, and the profits were to be divided in equal shares. The plaintiff claimed to be the sole and absolute owner of the patents, and he charged the defendant with having manufactured and licensed persons in London, Newcastle, and elsewhere, to manufacture, as his agents, splints and bandages according to the specifications.

The defence was that the plaintiff allowed Cocking to enter into arrangements of which complaint was now made, that the partnership as originally intended was to be a mere partnership in the royalties to be obtained from licences, and that the defendant had a perfect right to manufacture, and to receive the money arising from the manufacture and sale of goods, according to the patents—the only obligation imposed upon him by the partnership being that he should pay over to the plaintiff his share of the royalties.

Mr. Eddis, Q.C., and Mr. Loughborough appeared for the plaintiff, and suggested that a receiver should be appointed, and that all questions of account in dispute should be referred either to the official referee or to any arbitrator who might be appointed for the purpose.

Mr. Ingle Joyce, for the defendant, submitted that there was no ground for dissolving the partnership without the defendant's consent. Mr. Cocking had not appointed agents to manufacture according to the patents, but had simply manufactured the goods himself, as he was perfectly entitled to do with the knowledge and consent of the plaintiff. Without that consent he admitted he had no right to continue the manufacture, but the plaintiff was not entitled to interfere with the return of money already expended by him. There would be no difficulty in the defendant giving an undertaking not in future to manufacture these articles without the plaintiff's consent, and he was willing, without prejudice to any question in the action, to be appointed receiver himself, and to give security.

Ultimately it was arranged to take an immediate decree for dissolution of partnership, and to refer the account to the Registrar of the County Court of Plymouth, within whose jurisdiction the litigants reside. Mr. Joyce undertook that the defendant should not manufacture any more of the patented articles in question without the consent of the plaintiff, that he should keep an account of all sums henceforth received, giving security to refund the money that he might be found liable to pay.

The Vice-Chancellor intimated that security must be given within a fortnight, or a receiver would have to be appointed.

EAU DE COLOGNE.

AN action was brought on the 13th inst., in the Chancery Division, before Vice-Chancellor Sir Charles Hall, by Mr. J. M. Farina, gegenüber dem Jülich Platz, Cologne, to restrain the registration of three trade-marks in England, by a Mr. Buehlholz, who traded under the name of "Johann Maria Farina," at Cologne. The marks objected to were the signatures on the label, the design placed over the cork, and a picture of a house with the words "gegenüber dem Elogius Platz." The first two marks the Vice-Chancellor at once decided could not be registered. With regard to the third, one German Court had found against it, but a Court of Appeal had allowed it. For his own part, he believed it was intended to deceive, and therefore he should not permit the registration. The respondent to pay costs.

SAMPER V. HOLLOWAY.

BEFORE Vice-Chancellor Malins on February 13, Mr. John Pearson, Q.C., said that in an action by Antonio Samper, a merchant and wholesale druggist of Bogota, United States of Colombia, South America, against Thomas Holloway, the maker of the well-known pills, he had to move under very extraordinary circumstances for an injunction to restrain Mr. Holloway from continuing to insert in the newspapers published in the United States of Colombia the most outrageous libel against Mr. Samper that the Court had ever heard of, and a libel inserted without any provocation, and upon the foundation only of a letter written to the defendant by a person with whom he had no acquaintance,

and of whose existence he had no evidence. The application was supported by the affidavit of Alessandro Barega, the partner and son-in-law of Samper, who, being in Paris, received by the last mail a communication from his firm informing him of the publication of these advertisements. By these advertisements the defendant states that it had come to his knowledge that Antonio Samper, a wholesale dealer in drugs, was importing enormous quantities of spurious ointments and pills passed off as genuine articles of the defendant's manufacture, and the public were cautioned against purchasing "these despicable compounds, which are not only harmful, but often productive of very serious consequences." Antonio Samper did not import an "enormous" or any quantity of spurious pills from the United States or any other place, which were passed off as the defendant's; but he had imported large quantities of pills and ointments which he had obtained from the defendant's own establishment in London. Mr. Glasse, Q.C., who, with Mr. Dauncey, appeared for the defendant, said that his client had suffered very serious injury from spurious imitations of his goods made by the Americans, who were clever enough even to imitate the Government stamp. Mr. J. Pearson, Q.C., altogether denied that Mr. Samper had dealt in any such goods. It appeared that the defendant had given orders for continuing the advertisements in Bogota for six months, and their insertion was calculated to cause great injury to the plaintiff. The Vice-Chancellor: It has been said that this Court has no power to stop the publication of a libel. Mr. Pearson, Q.C., observed that the Judicature Act gave that power, and he asked the Court to order the advertisements to be stopped by telegraph. When Mr. Holloway was written to on the subject, Mr. Bowen May, his solicitor, wrote:—"Mr. Holloway has done nothing to his knowledge to damage your clients." The Vice-Chancellor: You swear that you do not sell any but genuine pills and ointment, and I should think that upon that statement Mr. Holloway would be willing at once to withdraw the advertisements complained of. The advertisements are such as ought not to be inserted without great certainty of their truth. Mr. Pearson, Q.C.: I want costs and damages. The Vice-Chancellor: But you cannot get either at the present stage. I should think that if they withdraw the advertisements, and apologise for the error that they seem to have fallen into, that would be sufficient. Mr. Pearson, Q.C.: I desire nothing more. Mr. Glasse, Q.C.: Their statement is that the order for the advertisements was only for six months, and that time has expired. Mr. Pearson, Q.C.: By the last mail we hear that the publication is still going on. Mr. Glasse, Q.C.: I will consent to omit the name of Antonio Samper, but I will not discontinue the advertisement. Mr. Pearson, Q.C.: If you publish another advertisement which does not affect me I shall take no notice of it. Mr. Glasse, Q.C.: These spurious imitations do very great injury to my client, whose profits amount to 50,000*l.* a year, and who spends 10,000*l.* a year in advertisements. There can be no objection to the first part of the advertisement, which runs thus:—"Beware of American counterfeits. I beg leave, most respectfully, to call the attention of the public generally to the fact that certain houses in New York are manufacturing spurious imitations of my pills and ointment," and I am willing for the sake of peace to omit the name of the plaintiff from the latter part, so that it shall read:—"It having come to my knowledge that divers persons import into your city a number of pills and ointments from the United States, which on a large scale are passed off as my genuine ones," and then the advertisement will go on as it stands at present. Ultimately it was agreed that the name of Mr. Antonio Samper should be struck out of the advertisement, and that, if possible, the alteration should be directed by telegraph.

DR. RUBINI, of Naples, who so enthusiastically recommended a saturated alcoholic solution of camphor many years ago as a specific in cases of cholera, is now 80 years of age, and is in want of the necessaries of life. The *Homeopathic Review* has published an appeal for him written by Mr. Frederic Smith, of Leeston, Weston-super-Mare. Dr. Rubini, it appears, has done all the work in respect to his discovery gratuitously.

Bankruptcies and Liquidations.

J. T. ALLEN, Drug and Chemical Merchant, &c.,
136 Fenchurch Street.

THE debtor, lately trading as above, under the firm of "John T. Allen & Co.," and now out of business, had filed a petition for liquidation, and furnished accounts disclosing liabilities to the amount of 2,659*l.* 8*s.* 10*d.*, with assets 238*l.* 8*s.* At the meeting of creditors held on December 18 a composition of 1*s.* 6*d.* in the pound, secured by Mr. John Allen, of Frederick Place, Plumstead, was accepted in satisfaction of the debts, payable within one month from the registration of the resolutions; and, on the case coming before Mr. Registrar Murray last month, His Honour ordered the resolutions to be registered. The following were in the list of creditors:—

| | £ | s. | d. |
|---|-----|----|----|
| Allen, J., Frederick Place, Plumstead .. | 741 | 17 | 10 |
| Soule, A. W., & Co., Bishopsgate Street Within .. | 280 | 0 | 0 |
| Adams, G., Gracechurch Street Chambers .. | 250 | 0 | 0 |
| Clark, G. F. H., & Co., Bury Street, E.C. .. | 250 | 0 | 0 |
| Sale, S. H., Falcon Works, Old Ford .. | 200 | 0 | 0 |
| Riddle, Mrs., Conduit Street, Plumstead .. | 144 | 0 | 0 |
| London and County Bank .. | 115 | 10 | 0 |
| Zarnbeck & Co., Mincing Lane .. | 108 | 19 | 11 |
| Daniels & Co., 26-Bush Lane, E.C. .. | 100 | 0 | 0 |
| Prie, N., Cumming Street, Pentonville .. | 90 | 0 | 0 |
| City Bank .. | 75 | 8 | 11 |
| Mordaunt Brothers, St. Helen's Place, E.C. .. | 20 | 0 | 0 |
| Allen, R., Conduit Street, Plumstead .. | 20 | 0 | 0 |

J. W. JACKSON, Druggists' Sundriesman, Ship Street and Old Steyne, Brighton.

THIS failure occurred in August, 1876, and liquidation by arrangement was afterwards resolved upon, the accounts disclosing unsecured debts 1,376*l.*, and debts fully secured 3,869*l.*, with assets 817*l.* 7*s.* At a meeting recently held a scheme of arrangement was assented to, and Mr. Copp applied to the Court on the 6th inst. for the confirmation of the resolutions. It seemed that the creditors had authorised the trustee to accept an offer made by Mrs. Emma Jackson, the debtor's mother, to pay a sum of 120*l.* upon the terms of the liquidation being closed, and the discharge of the debtor granted. The chief clerk, in reporting upon the matter, stated that the former trustee in the matter, an accountant named John Pattison, had absconded. He pointed out that the resolutions did not specify a time within which the 120*l.* was to be distributed. Mr. Copp said that the money should be paid within a month. The dividend would be 1*s.* 6*d.* in the pound. After some discussion, Mr. Registrar Murray confirmed the resolutions, and granted the debtor his discharge.

MCLEAN & BAMBER, Analytical Chemists, Stoke-upon-Trent.

THE bankrupts, who formerly carried on business in partnership as above, under the firm of "Alexander McLean & Co.," were adjudicated in July, 1875, and an application was made to the Court on January 17 for an order closing the bankruptcy. The trustee reported that the property had been realised, and a dividend of 10*s.* in the pound paid to the creditors. There was no objection, and Mr. Registrar Hazlitt made the order.

WILLIAM WILKINSON, Chemist and Druggist,
Chesterfield.

ON January 31 a meeting of creditors under the bankruptcy of W. Wilkinson, chemist and druggist, Gluman Gate, Chesterfield, was held at the County Court Offices in that town. The statement of affairs showed liabilities 819*l.* 4*s.* 7*d.*, and assets 343*l.* 17*s.* A previous meeting had been held about a month previously, when an offer was made by the debtor to pay a composition of 4*s.* in the pound on the security of himself and his mother. The offer was declined, and the meeting was adjourned to enable the debtor to make one more satisfactory to the creditors, but this he failed to do. At that adjourned meeting it was proposed that liquidation should be agreed to, and that Mr. E. B. Brownlow should be appointed joint trustee, without remuneration, along with the receiver; but Mr. Lander objected to this arrangement,

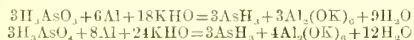
and the proceedings consequently fell through, and bankruptcy ensued. Mr. Registrar Wake presided at the meeting on January 31 under the bankruptcy, and a large number of proofs were received, many of which were objected to. Mr. E. B. Brownlow was eventually appointed trustee, with a committee of inspection. The public examination of the bankrupt was fixed for March 12.

The Poison Cupboard.

FISH POISONING.—It is stated in American journals (Macon *Hawkeye*, Key West *Key*, &c.) that the fish of the Gulf of Florida for 150 miles from the coast have been destroyed by the poisoned water of some river which enters the Gulf. Strata of dark-reddish water can be traced which kill all the surface fish as well as many which do not come in direct contact with it. The shores of the gulf are said to be covered with dead fish to such an extent that a pestilential stench is produced. Large fish, such as sharks, jew fish, and turtle, are met with, floating dead, at long distances from the shore.

POISONING BY ACONITE LINIMENT.—On December 28, Mr. Harcourt McLeod Busfield, surgeon, of Boothfold, Newchurch-in-Rossendale, drank a quantity of aconite liniment in mistake for sherry. He had been ailing for some weeks, and had passed a very restless night. He rose about half-past four, and soon after went into the surgery. He came out again and exclaimed to his wife: "I am a dead man!" He took abundance of mustard and water but rapidly became worse and died within an hour. In the surgery a bottle of sherry was found standing next to the aconite liniment, and it is supposed that he had taken the liniment in mistake for the wine.

A NEW TEST FOR ARSENIC.—Otis Johnson (University of Michigan) contributes the following to the *Chemical News*:—Place the mixture containing arsenious or arsenic compounds in a Marsh apparatus with a concentrated solution of potassic hydrate and a little aluminum wire. Upon warming, AsH_3 will be evolved, which may be subjected to the usual tests. If, however, the gas blackens argentic nitrate the proof is quite conclusive, since antimony by this process is not converted into SbH_3 . The equations are:—



POISONING BY LIQUID AMMONIA.—The *Medical Times and Gazette* records a case, treated at the Great Northern Hospital, of a man who had drunk half-a-pint of liquid ammonia. Castor oil and mustard-and-water had been administered before the man came into the hospital, and afterwards he was treated with milk and acetic acid, but he died after lingering for about 30 hours.

Obituary.

APPLEBY.—On December 4, 1878, Mr. William Calvert Appleby, chemist and druggist, Hilderthorpe. Aged 71.

CARR.—On January 9, at Berwick-on-Tweed, very suddenly, Jean Robertson, for 52 years the wife of William Graham Carr, pharmaceutical chemist.

DAVIDSON.—On January 15, 1879, Mr. John Davidson, chemist and druggist, Berwick-on-Tweed. Aged 79.

The deceased, after his apprenticeship, attended classes at Edinburgh University. Afterwards he served for several years as doctor on board one of the vessels belonging to the South Sea Whale Fishing Company. In 1833 he became proprietor of a chemist's business at Berwick-on-Tweed, which he continued until 1875, when he retired on account of his failing health. His upright, honourable character won him the respect of all his associates, and gave him much influence in municipal affairs.

FLETCHER.—On January 31, 1879 (of phthisis), Mr. Ashby Brackstone Fletcher, chemist and druggist, Totton, near Southampton. Aged 30.

Mr. Fletcher was the eldest son of Mr. Isaac B. Fletcher

who for many years carried on a pharmaceutical business at the above address. Quite early in life he engaged himself as assistant to the late Mr. Thos. Fardon, of Maidstone, and the energy, tact, and cheery disposition of the master were soon reflected in the young pupil. Leaving Maidstone he entered the pharmacy of Mr. Woolven, of Portsmouth, a gentleman well known for his scientific ability and mechanical skill. Further experience was gained in the establishment of Mr. Lynes, of Hertford, and subsequently as a senior dispenser with Mr. Duncan, of Bournemouth, now the possessor of probably the handsomest pharmacy in the United Kingdom. Joining his father in 1871, he succeeded the latter on his retirement from business in 1876, continuing the management till increasing weakness incapacitated him for all active exertions.

Mr. Fletcher obtained the Minor qualification of the Pharmaceutical Society in 1869, preparing himself in the various subjects by the aid of only such assistance as the text-book, the shop, and the hedge-rows he loved afforded him. Ten years ago his name appeared as a frequent competitor in our Students' Corner, and in September, 1869, he was awarded a prize for an essay on "The Mercurial Compounds of the British Pharmacopœia."

The *Hampshire Independent*, in recording Mr. Fletcher's premature death, says:—"The subject of our notice was, as our readers will recollect, a young man of splendid physique, and to all appearance the possessor of one of those iron-like constitutions which no amount of exertion or endurance seems to affect or impair. But, above and apart from all this, he was gifted with a truly loving and noble disposition. Generous, warm-hearted, and wholly unselfish, he had ever a kind word and a helping hand for those in need of assistance and sympathy, whilst the tenderness of his affection, his geniality, and bright good humour endeared him not only to his family but to a wide circle of acquaintances. Distinguished by a profound hatred of cant, artificiality, and sham of every kind, his life was none the less a true embodiment of that real and practical Christianity whose fruits are seen in abnegation of self, devotion to others, and in that charity which 'thinketh no evil.' About two years since consumption manifested itself, and, in spite of unceasing watchful tending, his strength gradually ebbed away. The funeral took place on Thursday, at Colbury Church, and the respect and esteem in which the deceased was held was amply testified by the general closing of the windows of most of the houses in the village. The coffin, of polished oak and brass, was borne upon a catafalque, only private carriages following. As the remains were lowered into the grave a bright gleam of sunshine radiated the mournful scene, emblematic, as it seemed, of the sure and certain hope of a glorious immortality, into which the spirit of the dear one who was thus laid to rest had already entered."

GOOSEY.—On December 20, 1878, Mr. William Goosey, pharmaceutical chemist, Stepney, London. Aged 73.

Mr. Goosey died after a painful illness (disease of the heart) which lasted five weeks. He established the business at Stepney in 1847, and later on was assisted by his son-in-law, Mr. William Rogers, who afterwards became his partner. Mr. Goosey was a great lover of botany and entomology, most of his leisure hours being devoted to roaming the forest and country in pursuit of specimens. His friends deeply regret the loss of the kind and extremely pleasant companion who was wont to give useful advice and information in their many rambles together. In 1874 he disposed of his share in the business to Mr. William Rogers, the present proprietor.

GRIMSHAW.—On December 17, 1878, Mr. John Grimshaw, chemist and druggist, Pemberton, Lancashire. Aged 45.

HARDING.—On January 15, 1879, Mr. Horace Edwin Harding, chemist and druggist, Batherstone. Aged 36.

HARGREAVES.—On December 18, 1878, Mr. Joseph Hargreaves, chemist and druggist, Preston, Lancashire. Aged 73.

HART.—On December 18, 1878, Mr. Philip Hart, pharmaceutical chemist, Higher Bridge Street, Bolton. Aged 23.

Mr. Hart was a young pharmacist of great promise. He passed the Minor Examination in May, 1873, before he was 18 years of age, and the Major soon after he had reached his

21st year. He took the medal for Senior Chemistry at the South London School of Pharmacy a few years ago, after a brief course of study there, and he will be remembered by his companions of that year for his amiability as well as for his talents.

HODGSON.—On December 24, 1878, at Philadelphia, Mr. William Hodgson. Aged 75. He was educated in the establishment of John Bell & Co., Oxford Street, and went to the United States about the year 1826. In 1828 he entered partnership with Dan B. Smith, and Thomas B. Powers, of Powers & Weightman, was one of his apprentices. He was at one time a frequent contributor to the *American Journal of Pharmacy*.

HORNE.—On December 22, 1878, Mr. George Horne, chemist and druggist, Oxford Street, Manchester. Aged 59.

ISHERWOOD.—On December 26, 1878, Mr. James Isherwood, pharmaceutical chemist, Old Kent Road. Aged 36.

PATES.—On December 25, 1878, Mr. George Pates, chemist and druggist, Fore Street Hill, Exeter. Aged 58.

RIDER.—On January 11, 1879, Mr. Edwin Rider, chemist and druggist, Lymington, Devon. Aged 70.

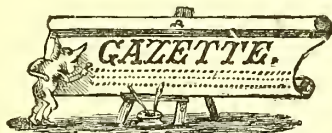
THOMSON.—On December 25, 1878, at Bombay, Mr. George B. Thomson, of the firm of Thomson & Taylor, chemists, Bombay, formerly of Edinburgh and Glasgow. Aged 38. Mr. Thomson had been resident in Bombay for the past 16 years.

WELSFORD.—On December 22, 1878, Mr. Wm. Welsford, chemist and druggist, King Street, Plymouth. Aged 52.

WEST.—On December 16, 1878, Mr. William West, pharmaceutical chemist, Henfield, Sussex. Aged 62.

WHITTON.—On January 5, 1879, Mr. George Whitton, formerly a chemist and druggist, Horncastle. Aged 68.

Mr. Whitton had ceased to carry on business for some years in consequence of infirm health, but to the last devoted all his powers to religious work. He occupied several offices in the Wesleyan body.



BANKRUPTS.

CLEMENTS, HENRY, 70 Hill Street, Walworth, aerated water manufacturer. January 24.

JENKINS, JOHN, Church Street, Tredegar, chemist. January 25.

MITH, JOSEPH MOORE, Cleveland Street, Hull, stearine manufacturer. January 29.

WALKER, BENJAMIN, & JAMES WALKER, trading as Levick, Walker & Co., 29 Mincing Lane, drysalter, the said James Walker also trading at 2 Greek Street, Leeds, as James Walker & Co., drysalter. January 7.

WILKINSON, WILLIAM, Gluman Gate, Chesterfield, chemist. January 15.

LIQUIDATIONS.

BARKER, JOHN, High Street, Shoreham, chemist. January 16.

BONSALL, ISAAC, 19 Dark Lane, Chancery Lane, Ardwick, mineral water manufacturer. January 30.

BRIERLEY, JOHN, Stafford Street, Barrow, chemist. January 16.

CLARK, GEORGE FREDERICK HENRY, 1 Bury Street, St. Mary Axe, gum merchant and drysalter. January 7.

COOMBS, GRAHAM LOWE, 164 Wallgate, Wigan, surgeon. January 15.

DENTER, JOSEPH, East Bridford, and Market Place, Bingham, chemist and druggist. January 9.

FORSTER, JOHN, 7 Albert Place, Norton Road, Stockton, late Tower Street, New Hendon, Sunderland, grocer and provision dealer, late chemist. January 25.

FOOTNER, WILLIAM RAMSHAY, West Harrowbarrow, Calstock, arsenic manufacturer. January 21.

GERMANN, FREDERICK, 6 Caxton Buildings, Booth Street, and 49 Granville Street, Chorlton-on-Medlock, Manchester, drysalter, provision merchant, and agent. January 13.

INCOLN, JOHN ANDREWS, 1 Brunswick Place, Uxbridge Road, commission agent, late 5 Park Place, Caledonian Road, mineral water manufacturer. January 17.

LATCHAM, ALFRED, 13 Gladstone Street, St. George's Road, Southwark, surgeon. January 2.

MARTLAND, WILLIAM, Blackburn, surgeon. January 10.

NELSON, JOHN, sen., JOSEPH JACOB NELSON, and JOHN NELSON, jun., trading as John Nelson & Sons, Bridge Street, Blyth, chemists and grocers, the said J. Nelson, sen., and Joseph Jacob Nelson, being also shipowners. December 24.

PARSON, WILLIAM MURRAY, 3 Great George Street, Bristol, surgeon-dentist. January 10.

PRESTON, THOMAS, 9 Booth Street, Piccadilly, Manchester, and Great Northbury Street, Hyde, drysalter and colour merchant. January 13.

SMCO, GEORGE, 28 Paul Street, Stratford, late Eaton Road, Margate, previously Epping, veterinary surgeon. January 3.

SMITH, GEORGE HENRY, 394 Regent Street, Salford, and High Street, Pendleton, chemist. January 18.

SVALES, JOSEPH, Station Road, Hadfield, chemist. January 14.

WILKINSON, THOMAS JAMES, 38 Clifford Street, Chorlton-on-Medlock, late 198 Oxford Road, Manchester, surgeon. January 15.

WOOD, JOHN, MOSES WALKER, and CHARLES RILEY, trading as John Wood & Co., School Brow, Warrington, manufacturers of aerated waters. December 23.

SCOTCH SEQUESTRATIONS.

BARRETT, WILLIAM HENRY, chemist, New City Road, Glasgow. January 30.

CAMPBELL, JOHN, jun., wholesale druggist, Glasgow. January 17.

FURLEY, ROBERT CHARLES, surgeon, 92 Lauriston Place, and chemist, 1 Downie Place, and 1 Earl Grey Street, Edinburgh. December 30.

LIDDLE & WOOD, drysalter and colourmen, 47 Regent Arch, and William Liddell, 1 Leven Terrace, and John Wood, 20 Annandale Street, all of Edinburgh, as the partners and as individuals. January 28.

DIVIDENDS PAYABLE.

CAMPBELL, ALEXANDER, JUN., & Co., sheepdip manufacturers, merchants, &c., Glasgow. Equalising and second, at McFarlane & Hutton's, 179 West George Street, Glasgow, on February 28.

CHAPMAN, JOHN, 5 Cheriton Gardens, Folkestone, surgeon. First and final, of $\frac{1}{2}d.$, at J. Minter's, solicitor, Folkestone, on and after January 13.

GREEN, ROBERT, 21 Nelson Street, Greenwich, chemist. First, of $9s.$, at Beddow & Son's, 2 Gresham Buildings, London, on and after February 3.

HOLLAND, THOMAS BULL, late Salford, surgeon. First, of $5s.$

JEWELL, THOMAS WILLIAM, Harwich, surgeon. Ninth and final, of $1s.$, making $20s.$

KEMP, GEORGE, Sheffield, surgeon. Third and final, of $2s. 6d.$, at Camm & Corbridge's, 133 and 135 Norfolk Street, Sheffield, on and after February 10.

LEYS, HENRY, 5 St. Thomas Street, Melcombe Regis, dentist. First and final, of $8s. 2d.$, at T. R. Charles's, King Street, Melcombe Regis, on and after January 31.

PARTNERSHIPS DISSOLVED.

APPLETON & SIMON, 155 Mare Street, Hackney, surgeons. December 31.

ASH CLAUDIUS & SONS, 7, 8, and 9 Broad Street, Golden Square, Mx., 83 Mount Pleasant, Liverpool, and 82 Grosvenor Street, Manchester, manufacturers of mineral teeth. December 31, as regards E. C. Ash. Debts by the continuing partners.

BULLOCK & HARGREAVES, Warrington, chemists. December 2. Debts by J. Hargreaves.

CETTI & GUANZIOLO, 11 and 31 Brooke Street, Holborn, philosophical instrument makers. January 2.

CROYDON, EDWARD HENRY, & TINDALL, HANNAH, Iron Market, Newcastle-under-Lyme, chemists. January 1. Debts by E. H. Croydon.

DAVIES, ALFRED F., & Co., 62 Bishopsgate Street Within, London, oil merchants and drysalter. December 31.

DAVIS PERRY & SON, 17 Southampton Row, Mx., vendors of patent medicines. November 22.

DUTER & Co., Cowburn's Lane, Heywood, Lancaster, manufacturing-chemists. January 9.

EKIN & FISHER, Grantham, Lincoln, chemists and aerated water manufacturers. January 6. Debts by F. D. Fisher.

GIBSON & HULME BROTHERS, Imperial Chemical Works, Church, Lancaster, indigo refiners. December 31. Debts by W. & J. V. Hulme.

GRAYLING & SUTTON, Sittingbourne, surgeons. January 1.

HEIM & THOMAS, Staple Hill and Pucklechurch, Gloucester, surgeons. August 5.

KEARNES & HICKMAN, Bilston, Stafford, chemists. October 1. Debts by R. H. Kearnes.

MILLIGAN & TREVES, Wirksworth, Derby, surgeons. December 31. Debts by W. Milligan.

PATTERSON & STANFORD, Stamford, ebemists. December 31.

PERRINS & CARLESS, Upper Butts, Worcester, veterinary surgeons. December 31.

ROBERTS & POWELL, Melton Mowbray, surgeons. October 1.

SILICATED CARBON FILTER COMPANY, Battersea, filter makers. Dec. 7.

SIM, JAMES, & Co., chemists and druggists, 76 King Street, Aberdeen. December 6, as regards the trustees of the late James Sim.

STEVENS & STEVENS, 1A Stoke Newington Green, and 13 High Street, Stoke Newington, surgeons. Dec. 25. Debts by G. J. B. and A. P. Stevens.

WHEELER & SHANKS, Townsend Street, Dublin, mineral water manufacturers. January 30. Debts by J. Shanks.

WILSON & MACRAE, Gateshead, surgeons. Dec. 31. Debts by R. H. Wilson.



For particulars of Advertisements, Subscriptions, &c., please refer to the first page of Literary matter. An Index to the Advertisements contained in this issue will be found in the front portion of the Journal.

OFFICE—Colonial Buildings, 44a Cannon Street, London.

RENDALL'S THEOBROMINE, OR CONCENTRATED COCOA,

BEING a first-class article, and nicely got up, commands a good sale by all Chemists who bring it under the notice of their customers.

In 1s., 2s., 3s. 9d., and 7s. 6d. tins, through the Wholesale Houses, or direct from the Proprietor,

J. M. RENDALL,
28 QUEEN STREET, EXETER.

Chief Wholesale Agents—

SANGER & SONS, 150 OXFORD STREET, W.

HAWKER'S JUJUBES. See page 5.

MUMFORD'S PURE CRUSHED LINSEED.

PRIZE MEDALS: LONDON, 1873; PARIS, 1875.

20s., net, per cwt., Bag included; or 21s. in 1-lb. Cask; in 14-lb. and 28-lb., 22s. per cwt., delivered in London. BEST QUALITY; NO OIL EXTRACTED. Carefully cleaned and ground so as to retain the natural colour of the Seed without being heated. Special quotations for Larger Quantities. Samples, Reports, and Analyses on application, post free. NEWCASTLE GRANARY & STEAM MILLS, FARRINGTON ROAD, LONDON, E.C.

All Chemists are invited to apply for a Copy of our
**Wholesale Price List of
HOMŒOPATHIC MEDICINES,**
Mother Tinctures, Pilules, Globules, Sugar of Milk, Medicine Chests and Cases, Glass and Cardboard Goods, and all Sundries connected with the Homœopathic Business.

W. BUTCHER & CO.,
Wholesale and Export Homœopathic Chemists,
SPENCER PLACE, BLACKHEATH, LONDON, S.E.

STEDMAN'S TEETHING POWDERS.

| | | |
|---|--------------|-----------------------------|
| 1 1/2 size (containing 9 powders) | 8/6 per doz. | } less usual } discount. |
| 2/9 " " " 27 " | 24/- " " | |
| 11/- " " " 216 " | 11/- net. | |

A mixed parcel to value 78/- net, at 6/6, 18/-, & 120/- per doz.

Terms Cash with Order.

Manufactory—78 EAST ROAD, HOXTON.

IMPORTANT TO CHEMISTS, SODA WATER MANUFACTURERS, AND OTHERS.

Removal of Lead from Water.

THE SILICATED CARBON FILTER

Entirely removes Lead from Water, thus meeting the complaints that arise from time to time as to the presence of Lead in Aërated Waters.

For confirmation of this assertion, see the opinions of such authorities as Dr. BARTLETT, Professor WANKLYN, and others, at page 74, December, 1876.

REDUCTION IN PRICES.

GENERAL MINERAL WATERS DEPÔT
27 MARGARET STREET, REGENT STREET,
LONDON.

THE ANALYSED TEA.

Sold by Chemists throughout the Kingdom.

FOR TERMS, ETC., APPLY TO

RITCHIE & POPE,

Wholesale Agents to the Analysed Tea Association,

6 KING STREET, BORO, LONDON, S.E.

THE ANALYTICAL SANITARY INSTITUTION,

Conducted by

ARTHUR HILL HASSALL, M.D., and OTTO HEHNER, F.C.S.,

54 Holborn Viaduct, E.C., London,

For the Analysis of Waters, Sewage, Air, Gases, Food, Drink, Drugs, Poisons, the Urine, Ores, Manures, Acids, Alkalies, and all Commercial Products.

Pupils received for instruction in Water and Food Analysis.

Laboratory Teaching for Medical Students to qualify as Medical Officers of Health and Food Analysts under the Adulteration Act.

A Vacancy for an Articled Pupil.

UNGUENTUM PETROLEI. See page 88.

SEE SEABURY & JOHNSON'S Advertisement of INDIA RUBBER POROUS AND SPREAD PLASTERS on page 95.

HOMŒOPATHIC MEDICINES.

E. GOULD & SON,

Chemists by Appointment to the London Homœopathic Hospital,
Manufacturing Homœopathic Chemists,

Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies.

For Particulars apply at 59 Moorgate Street, E.C.

PURE COD LIVER OIL. See page 81.

EDITORIAL NOTES.

CO-OPERATIVE TRADING.

THE widely-extended dispute of Stores v. Shops, which about a month ago was skillfully opened by the *Telegraph*, and the infection of which has since been caught by almost every other printed sheet which this country produces, has disclosed nothing new, and, so far, has resulted, as one of the managing directors of a leading store has informed the world in the *Nineteenth Century*, in an enormous influx of new customers to the already gigantic businesses which the co-operative movement has developed. Nevertheless, we cannot regret that the discussion has arisen. Exaggerated statements have been made on both sides, but the points at issue have not been confused. Journalists have glanced at the subject, and have forthwith uttered their oracular decisions with all that confidence which distinguishes their utterances on no matter what subject. Generally they have doomed the unfortunate tradesmen to a few more years of struggle for existence prior to their ultimate annihilation, and they look upon this consummation with apparently much the same unconcern as that with which they contemplate the destruction of an Afghan or a Zulu. But no one of them has fairly met the original and primary complaint of the tradesmen. The one appeal which the trading classes have united in making is that they shall not be unfairly matched

in competition with an organisation of well-paid Government servants. That civil servants should co-operate to buy their tea and sugar is legitimate enough, but that they should receive handsome salaries from the country for doing one class of work, and should then spend their time, and not their leisure time only, in carrying on a big shop, is just as honest as if the clerks in a bank should receive their salaries from one firm and sell their energies to another. The only reply vouchsafed to this complaint is that the grievance thus stated is purely sentimental. We are told by the *Times* and the other defenders of the civil servants that this matter is quite a trifle; that stores would still be as powerful competitors if civil servants had nothing at all to do with them; and that the trumpery exemptions from the payment of income tax, receipt stamps, and other contributions exacted from ordinary traders are so fractional in their importance that they cannot enter into the calculation of the chances of Traders *versus* Stores. Now it happens that the stores established and conducted by Crown servants have been by far the most successful; have been, indeed, almost the only successful co-operative stores of any magnitude which have yet appeared. They are well rooted now, it is true, and we do not suppose a change of management would greatly affect the trade done. But traders have a right to justice, whether the matter be small or great, and most of them recognise that they have no right to anything more. Their claim is an awkward one for the defenders of the civil servants, who invariably try to evade it. This is so much the better reason why it should be clung to with tenacity between this and the General Election.

From much that has been written lately it would almost seem that small shops were on the verge of being stamped out altogether. It seems to be taken for granted that the stores have swamped all the retail trade of London, and hints are given of their intention to established missionary centres in every English village before long. Perhaps those economists who see so far before them will explain how it is that little shops have managed to exist at all hitherto. The conditions never can be equal between a great capitalist with an enormous business and a small trader struggling to make both ends meet; and yet in every country in the world two classes are competing together, are to some extent interchanging positions, and are both found useful in the fabric of society. If we can only be assured of fair competition, that is, if our competitors are forced to lose what practically amounts to a Government subsidy, the stores will do more trample out the shops than grasping capitalists of former times have been able to secure all the trade of a town where they have established themselves.

What harm would the stores do if they were purely co-operative stores? One of the largest has about 8,000 *bonâ-fide* shareholders, who, we admit, are justly entitled to co-operate, and in addition 50,000 ticket-holders, which in reality means, not only 50,000 families, but 50,000 circles of acquaintance. What palpable absurdity to refer to a system like this as co-operation!

That the present scare will have the effect of checking the credit system, and the tip system, is sincerely to be hoped. Until now tradesmen, as a rule, have never appreciated with anything like accuracy the true value of money. At the they have been reckoned the difference between ready money and a year's credit as being something like 5 per cent., which does not cover the net cost of book-keeping, making out bills, collecting accounts, and so on. To a man whose business will absorb his money, ready money ought to be worth rather 40 or 50 per cent. than 5 or 10 per cent.

Chemists and druggists are in a rather special position in

respect to co-operative stores. On the one hand, they could be the most readily crushed of any class, seeing that their returns being comparatively small, their profits have to be relatively higher. A store which deals in drugs only treats this department like other departments of its business, trusting to a general profit to make the balance-sheet come right. On the other hand, there is no business where confidence between customer and vendor is so necessary and so usual, and it is certain that if chemists will only fit themselves thoroughly for their business, they need never fear any such mechanical competition as co-operative stores can bring to bear on them. Besides this, as we all know, there is an action pending in the Court of Queen's Bench to resolve the question whether an association of proprietors may infringe the Pharmacy Act at their own sweet will. If this is decided in our favour, it will be the duty of the Pharmaceutical Council to take vigorous measures to vindicate the law on behalf of the trade. If it should be decided against us, the duty of the Council will be equally evident—namely, to amend the Pharmacy Act so that its words shall say what they undoubtedly mean.

THE CLERGY CO-OPERATIVE STORES.

It is satisfactory—at least to those who desire to retain that reverence for the English clergy which their title suggests, and which their office should demand—to find that the scheme of a big shop, with Canons, Royal Chaplains, and other spiritual dignitaries as directors, has not met with universal favour in the body itself. The first to criticise the movement unfavourably, as far as we know, was Dr. Utterton, Suffragan Bishop of Guildford. Pointing out that the clergy have already ample security against unfair trading on the part of tradesmen, in the existing co-operative associations, he urges his brethren to pause before they join the company, on the ground that any participation in its operations must tend to alienate a very considerable section of their parishioners from the Church. On similar grounds the *English Churchman* expresses strong objection to the proposed association. If it were intended to be simply and solely a benefit or friendly society for the clergy, says this journal, the case would be entirely different; but the promoters of the undertaking would, we believe, be the first to disclaim any such idea, and therefore it becomes, to all intents and purposes, a trading company, formed with the object of realising dividends and making profits.

But a still more severe condemnation of the scheme has been pronounced by an eminent provincial clergyman, and for the credit of the order we will hope that his letter is only a specimen of many others which have not been published. The Rev. R. H. Baynes, vicar of St. Michael's, Coventry, and honorary canon of Worcester Cathedral, sent the following to the secretary of the association in reply to a request that he would take shares:—"Sir,—Notwithstanding the array of great and honoured names that appear as patrons of the 'Clergy Co-operative Association,' I look upon the whole movement as a grave and fatal mistake. In the most solemn moment of our whole lives, when we were admitted to the order of priesthood, the Bishop expressed 'good hope' that we had 'clearly determined by God's grace to give ourselves wholly to this office;' and to me this rushing of the clergy into speculative shares and becoming themselves active members of the great trading class is something far more than unseemly. And again, we, as clergy, rely in the main on this great trading class for subscriptions and offertories to keep in efficient working order all our parochial machinery; and is it likely or to be expected

that we should receive this aid when our laity know that we have been smitten by this modern co-operative mania? I not only must decline to take any shares in this elergy-demoralisation society, but I go so far as to say that if any were given me I should refuse at once to accept them."

VIOLET POWDER.

THIS name is as puzzling to foreigners as to English analysts. In the *Archiv. der Pharmacie*, published at Halle, for December last, is a short article headed "*Pulvis rad. Iridis florent.*," purporting to be an abstract from THE CHEMIST AND DRUGGIST of August, 1878, p. 34. It says:—" *Pulvis rad. Iridis florent.* seems to be frequently adulterated in England; at least, Dr. Russell, of Glasgow, reports that he has found it mixed with arsenic, starch powder, plaster of Paris, and chalk (*kreide*). " The paragraph alluded to states that Dr. Russell had examined three samples of violet powder; had found one to consist of pure starch, that another contained starch and plaster of Paris, and the third, starch, plaster, and French chalk. Arsenic was found in neither. This correction ought, perhaps, to be made, though it is probable the mistake will find its way into many other books. For the sake of foreign readers only we may add that "violet powder" is a purely conventional term for what is known in Germany as Puder or Toiletten-puder.

PHARMACY AND CHARITY.

THERE are several of the religious orders in France which do a good trade in medicinal liqueurs, but, besides that competition, the pharmaciens suffer another, which seems to vex them more. This is the illegal practice of pharmacy by the sisters of mercy, who to a great extent win their way among their poor clients by the gratuitous administration of medicines. There can scarcely be room for anything like commercial jealousy of such a system as this, and we suppose the objections of pharmaciens are to be ascribed simply to a desire to carry out the objects of the law, which are that medicines shall only be compounded by sufficiently skilled persons. Recently two sisters asked for admission to the examinations for the grade of second-class pharmaciens, petitioning at the same time that as they did not propose to practise pharmacy for gain they might be allowed to dispense with the preliminary examination, the curriculum of study, and the six months which they must pass in a pharmacy. The Minister of Public Instruction, to whom the petition was sent, has refused to grant the application.

BANKRUPTCY LEGISLATION.

FIFTY of the leading banking and financial houses in the city of London have signed a memorial to the Government setting forth in an earnest manner the urgency of the necessity for a speedy and thorough reform of our existing bankruptcy law. "The experience of every year," says this memorial, "adds largely to the body of disastrous facts which show that the speedy amendment of the Act of 1869 has become one of the most urgent necessities of the time, both in the interest of the mercantile class and for the maintenance of that high tone of commercial morals and honour for which this country has been distinguished."

It is well that such an impulse has at last come from a quarter which must command attention. Our bankruptcy system as at present worked is simply a burlesque of commerce, law, and justice. This arises, not so much from the inherent defects of the Bankruptcy Act, the theory of which

was to carefully protect every interest, and to give powers of severely punishing fraud, but from the proved impracticability of the elaborate scheme provided. The memorial referred to declares that "The present bankruptcy law affords new and vicious facilities to insolvent persons to escape from the reasonable control and supervision of their creditors by private arrangements wholly beyond the jurisdiction of any public court or judge. And by reason of these facilities, it is the fact that every year there is an increasing number of cases in which the grievous and dangerous scandal is exhibited of men failing for vast liabilities, and finding it easy, in consequence of the defects of the present law, to get their speedy discharge by the payment of no dividend, or a dividend of some small fraction of a pound or even shilling, and without being subjected to any efficient investigation of their affairs, or of the conduct and proceedings which have led to their insolvency."

The basis of the present bankruptcy law is to leave, as far as possible, the settlement of all insolvent estates to the direct control of the creditors. This, it might have been thought, was the correct principle; but it has been found that creditors who have already lost money in an insolvent estate can only obtain a full investigation by proceedings, costly and troublesome to themselves, and very doubtful in their results. The memorial alludes to this, and declares that the obligation of exposing the misconduct of bankrupts should, in the plain interests of public morality and commercial policy, be dealt with by a public court and judge. The appointment of a court under the presidency of a distinguished mercantile lawyer is strongly urged, that court to deal with all insolvent debtors, and distribute their assets as economically and expeditiously as possible.

There ought to be no distinction of process in reference to the early stages of action with regard to an insolvent person, whether his affairs be small or great. Every such person ought to come before a court interested only to maintain the integrity of the law; and the law ought to be in harmony with the principles of commercial justice. Disabilities would naturally fall to the lot of everyone who failed, but it should be for the court to pronounce whether the insolvent had honestly or dishonestly incurred liabilities which he was unable to meet. The definition of fraudulent trading would need to be considerably extended, though it would have to be so carefully expressed as not to discourage legitimate enterprise. The immediate object, however, is to infuse into the Government that spirit of earnestness respecting this important subject which evidently animates the leaders of the English commercial world.

RECIPROCITY.

WE have received a vigorously-written plea for reciprocity by Mr. S. E. Ashton (Simpkin, Marshall & Co., ls.). The author states one side of the case excellently, but he carefully avoids the other side. It is melancholy, no doubt, to think of our sugar refineries closed in consequence of the bounty paid by the French Government on exports. But before we change our commercial policy it is necessary to regard this matter from a national, and not from a sugar-refining, point of view. If France likes to bestow on us some of her superabundant wealth, no matter in what form, should we not accept her offer? So, if through any circumstances another nation can produce mousetraps and sell them to us at lower prices than we can make them, is it not superficially evident that we had better buy those mousetraps, and devote our energies to some more profitable labour? If it is said, and Mr. Ashton almost says this, that there is no groove of trade in which we can spend our forces

to advantage, we can only say that then England's sun has set, and neither reciprocity, nor protection, nor co-operation will galvanise our commerce into activity again. Mr. Ashton repeatedly insists that reciprocity is not protection, but merely an arrangement of duties which shall give our producers a fair chance with foreigners. We do not understand such delicacies of logic. So far as it goes it is protection pure and simple. Protection never was understood to mean the necessary and absolute prohibition of all competitive imports. Why are he and his party so afraid of the word protection? Perhaps the reason is not very difficult to find. Then he also maintains that he does not desire to see a policy of retaliation introduced. Mr. Ashton is hard to please. He wants both protection and retaliation, but he does not like the words. For ourselves, we have no objection to either, if they would really benefit this nation more than they would damage it. We believe, indeed, that some very good reasons may be advanced for a retaliatory policy, if it be clearly understood that such a course is adopted for the direct purpose of retaliation, and the force of the arguments in favour of reciprocity lie in this, that they appeal largely to our sense that a fight is desirable sometimes, even at our own expense. Spain, for instance, suggests itself as a most promising *corpus vile* for an experiment. That nation insists that England should admit her wines at the same rate per gallon as the less alcoholic products of France and Germany, and, because we will not do this, she has, within the past few years, so arranged her tariff as to shut out almost completely British manufactures. We see no reason in the world why, to keep up our name for free trade, which in this instance does not exist, we should refrain from retaliation. A double duty on Spanish wines for a time would soon bring the *enormous* to terms, and would only have the effect of benefiting the British public by the greater consumption of lighter and more wholesome beverages. If the reciprocity advocates could confine themselves to such cases as this they would have a much better chance of success than they have in their advocacy of such a universal tariff as would have to be imposed to satisfy all of them.

THE NEXT ELECTION OF PHARMACEUTICAL COUNCIL.

THE signs of the next contest for the Pharmaceutical Council are at hand, the first being the ballot which indicates which of the present members shall retire. Out of the 21 members who compose the Council 14 retire annually, seven having served two years since their election, and the other seven by lot. By this system the members have no one but themselves to complain of if they are misrepresented for more than a year. If, therefore, the violent energy which characterised the recent special meeting was anything more than mere sound and fury signifying nothing, it ought to manifest itself by a decided change in the constitution of the Council next May. It happens, curiously enough, that the three councillors who most warmly supported the apothecaries at the late meeting, and who were especially marked for censure on that occasion, namely, Messrs. Gostling, Sadford, and Schacht, are protected from the judgment of their constituents by the accident of the ballot. They are among the seven who will retain office for another year. It is probable that the seat of one of the other members of this group will be rendered vacant before the election.

We do not anticipate any election results differing much from those which have preceded. There is a mass of quiet Toryism in the Pharmaceutical Society which will far more than outweigh the influence of the more energetic spirits who revealed "a bit of their mind" in January. But the

latter have no reason to be discouraged. Their action in promoting and conducting that meeting has not been without its effect even now: at least, we imagine we can trace some of that effect in the fact that some proposals for the amendment of the Pharmacy Act were adopted at the last Council meeting "unanimously."

ANALYSM.

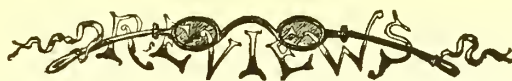
SEVERAL cases of this complaint demand notice this month. In the case of a Chester grocer, summoned for adulterating coffee, Dr. Carter Bell is said to have reported:—"Sample adulterated with 20 per cent. of vegetable matter, which I believe to be chicory." The chairman of the magistrates dismissed the case, remarking that "it was nonsense for Dr. Bell to say that he could not tell whether the added matter was chicory or not."

In a case of a publican prosecuted at the Bridgewater County Petty Sessions, on January 31, for selling adulterated whisky, the county analyst's certificate stated that the sample was entirely composed of plain new grain spirit lowered by the addition of about 30 per cent. of water and coloured with burnt sugar. The case was contested, and the sample was sent to Somerset House. The certificate received at the adjourned hearing stated that the spirit was from a mixture of malt and raw grains, from which whisky was generally prepared, and that it was free from impurities. The case was dismissed.

Mr. Angell, of Southampton, who holds the appointment of analyst for Guildford, has tried to stir up the milk of sulphur question again. We make no reference to the cases in which sublimed sulphur was sold for our old friend the "milk," but why should Mr. Angell have certificated a sample containing 7.8 per cent. as being an adulterated sample? We will not insult Mr. Angell by supposing that he had not studied previous reports of similar trials. That was his simple duty to do, and of course he did it. But then, as the *Analyst* always tells us, it is no business of the chemist to do more than merely report on the samples submitted to him. He does not concern himself with the interpretation of his results. Perhaps Mr. *Analyst* will be good enough to read the report of the Guildford case. Mr. Angell said "he regarded himself as a representative of the interests of the Food and Drugs Act in that borough. He suggested that the grocers as well as the chemists of the town should be called upon and asked for milk of sulphur." We have little doubt that it was lime that Mr. Angell expected to find, and we venture to ask whether it is fair to the ratepayers as well as to tradesmen that an analyst should have the power to be eternally reopening questions after superior authorities have decided them.

THE MINIATURE EDITION OF THE "CHEMIST AND DRUGGIST."

WE enclose with this copy of our journal a reproduction of our last number in miniature. This edition contains every page, and indeed every letter, which appeared in our January issue. The reproduction has been made by photographic and lithographic processes, and is, no doubt, the largest experiment of the kind that has ever been made. We shall send copies to our foreign subscribers by special mail, as we are not allowed to enclose it with the current copy. We also propose to distribute some thousands of copies to chemists and druggists who are not at present subscribers, and we hope the result will be a considerable accession of new friends, and an increase of business from our advertising supporters.

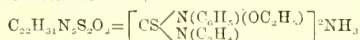


AND

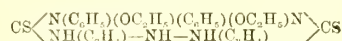
Literary Notes.

Watts' Dictionary of Chemistry.

THE first part of a third supplement, making the eighth volume of Watts' "Dictionary of Chemistry," has been published during the past month by Messrs. Longmans & Co. A second volume is announced to complete this supplement. Part I, now before us, reaches to "Fustic," and contains 838 pages. The whole supplement claims to present a record of the chemical work accomplished since the previous supplement was completed, about 1873. The period thus covered has evidently not been less distinguished for activity among chemists than any former five years. Last year, too, was distinguished by the very important victory over the hitherto unconquered gases, accomplished by Messrs. Pictet and Cailletet. This will probably form a chapter in the second part of the supplement, which will also contain (as we judge from a note on page 729) a record of Lockyer's recent experiments on the spectra of elementary bodies—a work the value of which cannot yet be appreciated. Confining ourselves, however, to the matters treated in the volume now before us, it must be admitted that these prove that modern chemistry is still mounting with undiminished vigour at least into the clouds, if not into the empyrean. We presume that fully one-half of the work recorded here is of German origin. A large proportion of it is of such a character as to be outside the range even of experienced chemists, except those who happen to be working in the particular corner treated. We open the volume quite at random, and come on page 397 to a notice of di-*para*-chlorophenyl-thiocarbamide. Immediately above we are referred to an article on the reaction of diphenyl-thiocarbamide with carbodiphenylamide. Just beyond we find the process for preparing ethylidene-phenyl-oxethyl-thiocarbamide-ammonia—



or



Such instances might be multiplied hundreds of times from this volume. We do not mention them to criticise them, far less to ridicule them, but to show the direction which modern chemistry is taking. They suggest also the immense importance of a work like Watts' "Dictionary," in which the elaborate labours of English, German, French, Russian, and Italian chemists are classified and summarised. The volume, however, contains much other matter than such as may be classed as the highest chemistry. We have, for instance, abstracts of all the investigations which have been published by public analysts respecting such subjects as beer, butter, and the like. Benzene compounds, and the general decomposition products of aniline, take up by far the largest space of any section; cinchona and its alkaloids also make a respectable show. An excellent specimen of editorial skill is evinced in the article on "Fermentation," which, with its subsidiary sections, occupies about 10 pages. The discordant views on this subject are indicated, and the mass of experiments by many investigators reduced to order and conciseness. The contributions to this volume are: a valuable one on "Forest Trees," by Mr. R. Warington, in which the chemistry of the trunk and branches, the sap, the leaf, the blossom, fruit and seed, and the forest litter, are separately treated. The annual requirements of a forest in the way of food may be estimated from some Bavarian observations, which show, in wood and leaf litter, that the total annual produce of dry matter averages 5,755 lbs. per acre. There is another article on "Barley," also by Mr. Warington; a contribution on "Flame," by Dr. Thorpe; and one on "Cumulative Resolution," by Dr. Mills. This term has been given by the author to a phenomenon first observed by Wurtz, and latterly to a more frequent degree by himself, consisting of the combination of a substance or mixture of substances with itself, a certain number of times, a

particular portion of it being lost each time according to some fixed law. Thus, says the writer, "bismuthic nitrate, when decomposed by a gradually increasing quantity of water, yields a series of bodies which are less and less nitrogenous and more and more bismuthic," the final result being the entire removal of the acid element.

Animal Chemistry. By C. T. Kingzett, F.C.S. London: Longmans, Green & Co.

THE division of labour which the extension of the fields of chemical research has forced upon most of those who have adopted the science as a profession is not exactly suited to the genius of Mr. C. T. Kingzett. Lately that gentleman favoured the world with a treatise on the alkali trade; before that he dived deeply into the chemistry of essential oils, terpene, and such like; now he comes forward as the apostle of physiological chemistry. The term is suggested by the aggressive style which the author has chosen to adopt. In a general way previous treatises on the same subject are referred to in a tone of contempt. On page 15 we are told, "as for most of the text-books in use, not only in this country, but abroad also, they are the merest compilation of facts—facts picked up here and there, and arranged together in chapters." There is much else to the same effect. The preface and the general introduction to this book lead one to expect that a grand revelation of the mystery of life is to be unfolded in the pages which follow. "There are those who hold the opinion that in life there is something which renders negative all our conclusions drawn from laboratory experiments, and nullifies all our hypotheses of functions; but they are men who fail to grasp thoroughly the conditions upon which life depends" (page 10). Poor fools! how gladly would they be enlightened! Is it true, then, that some laboratory experiments have disclosed to Mr. Kingzett the conditions on which life depends? And if so, why cannot the rest of us grasp them thoroughly? Well, "the dogmatism of churches and ages" seems to be partially responsible, but mainly it seems to be that our "minds are still tainted with that bias against improvement so common to the savage" (page 11). A little later we come on almost the only modest passage in the book, but it is impossible for Mr. Kingzett to maintain the tone throughout even one sentence. He is good enough to admit "that we stand but on the threshold of knowledge, and many must be the thinkers and workers, and generations upon generations will pass away, before the processes of life shall stand forth entirely revealed; before it shall be known how, from a few simple matters, tolerably well known themselves and administered as food, is built up Man, with his marvellous and beautiful structure, with his power of thought, feeling, and action. That such a time will come scientific men have no doubt" (page 23). Mr. Kingzett is far too intelligent a writer to make us suppose that he would maintain all he has written. We do not imagine that even he would declare in his calmer moments that he knew all about a substance or a process simply because he has given a name to it. It is mainly by a large infusion of this tall talk that Mr. Kingzett's manual differs from its predecessors in the same line. This is what we presume he means by the "connecting principles" and "scientific philosophy," in which, he says, other manuals are so deficient. The bulk of the work is necessarily "a compilation of facts—facts picked up here and there, and arranged into chapters." The vast majority of the facts are, of course, the same as would be found in any of the despised text-books. These are occasionally commented on with great acuteness, and all of the chapters, it must be admitted, indicate the author's thorough familiarity with the subject he treats. There is evidently, however, a serious defect in his arrangement of his material, for the reader is continually being perplexed with allusions to subjects that come in an after part of the book. On pages 127-28, for instance, we find five allusions to subsequent studies, only one of which gives the reference. Apart from this difficulty the style is not of the easiest. The author assumes a very liberal chemical education among those who shall read his book, and yet he introduces the work with many lamentations over the unhappy condition of medical students in respect to physiological chemistry previous to its publication.

In the course of the work Mr. Kingzett makes frequent reference to his own researches. One of the most interest-

ing of these professes to explain the way in which alcohol occasions *delirium tremens* (p. 316). Evidently the theory was prepared beforehand, but it is supported by a few experiments *pro formâ*. Briefly the method was this: Ox-brains freshly removed from the skull were suspended in watery solutions of alcohol, of strength varying from 6 to 50 per cent. It was found that up to a certain point the alcohol had no more effect on the brain than water alone, that both water and alcohol dissolved certain portions of brain matter, but that alcohol in large proportion dissolved some that water would not affect. The serum, rich as it is in salts, prohibits the action of water as such in life, and therefore, we presume, it is to be concluded that alcohol above a certain quantity has the direct effect of dissolving portions of the brain and lowering its specific gravity. We do not think that any one considering the stages of alcoholic disease will find this explanation of much assistance. Nevertheless, the experiments are suggestive, and the subject is certainly worthy of the most careful research.

The chapter on "Fermentation, Putrefaction, and the Germ Theory of Disease" (p. 424) is an excellent specimen of the author's ability. The conflicting views on these subjects are concisely and lucidly dealt with, and nobody is treated with contempt. To the astonishment of the reader, however, the section concludes with an extraordinary puff of "Sanitas," which is treated as if it were the only antiseptic or disinfectant worthy of further existence. "Of other antiseptics or disinfectants it is unnecessary to write at any length," says this candid author, and the little he has to say of them is chiefly to their disadvantage.

A chapter on "Character," in which the author poses as a materialist, and in which tall talk again comes into requisition, and a thoughtfully-prepared series of subjects suggested for research, conclude this very unequal volume.

A Manual of Practical Chemistry: The Analysis of Foods and Detection of Poisons. By A. Wynter Blythe, M.R.C.S., &c. London: Griffin & Co.

THE title "Practical Chemistry" appears to be somewhat misapplied in this case, as the book treats only of a branch of the subject. There are several works on practical chemistry in the English language, and so far as we can recollect none of them cover the same ground as this book, indeed, so the author states in his preface, and at the same time observes that only in continental literature does a counterpart of the work exist, instancing Sonnenschein's "Handbuch der Gerichtlichen Chemie" as one of this class. This branch of practical chemistry would be more correctly defined as Chemical Jurisprudence.

The chapter on milk contains a great deal of valuable matter which is not to be found in any other single work, and its value is greatly increased by the extensive references. In referring to the detection of borax there is a drawing of the spectrum of boracic acid given, showing the position of the characteristic bands. To make this figure of any value here ought to be some reference to the scale employed, as it is, nobody could possibly identify the spectrum. The same remark applies to fig. 14 in the chapter on the detection of phosphorus. The spectrum of a phosphuretted hydrogen flame shown in the latter case is intended to represent one of Boisbaudran's beautiful drawings, and without some account of the manner in which his measurements may be reduced to those obtainable with other instruments it would be impossible to make any practical use of the figure. The scale, however, is of little importance, for nothing could be more unlike the real spectra than these woodcuts, and to make matters worse the author refers to the delicately-shaded bands of the phosphuretted hydrogen as lines, a term that is utterly inapplicable to the real spectrum, but peculiarly appropriate to the woodcut. The sooner attempts at representing such spectra by means of woodcuts are abandoned the better for a branch of art that is capable of great things within its own proper sphere.

An excellent feature of this book, that ought to be more extensively adopted in our English scientific literature, is the bibliography that is given at the end of most of the special articles. These lists of the various papers that have been published on the several subjects under which they occur are of the greatest value to the professional as well as to the scientific chemist. In a work of moderate dimensions it would of

course be impossible to give anything like a complete bibliography of each subject, but the value of even a short list of works would be greatly enhanced by a brief statement of the substance of the various publications referred to, when the titles alone are not sufficiently explanatory.

Pharmaceutical chemists will find this work of great value. It contains a vast amount of rare and valuable information.

The Year-book of Pharmacy.

THE ninth volume of this handy compendium of pharmacy reached the members of the Conference early in the new year. It is a model "year-book," and the index to the whole series, which will doubtless accompany, or quickly follow the volume to come, will give those who possess the series a capital encyclopædia of the progress of pharmacy. The present volume is about 20 pages smaller than its immediate predecessor, but the "Year-book" proper contains 50 pages more, so that the curtailment has been effected in the account of "the Transactions of the British Pharmaceutical Conference," which was certainly more open to the charge of verbosity than the reports on pharmacy.

Nothing of importance seems to have escaped the notice of the editor, and the 20 pages of introduction are as masterly as usual. To give an abstract of it is impossible, but we do not think the author should grumble, even to himself, at the limits he is confined to. Anyone could write an extended summary of the progress made by pharmacy in 12 months; few are able to give a bird's-eye view of the matter in 20 pages of fair-sized print.

It is certainly to be hoped that with the next volume, or at no very distant period, a general index to all the Year-books will be issued to the members, or at least prepared for all who like to purchase it. And it is even more earnestly to be wished that care will be taken to index the subjects rather than the titles of the papers. A single instance will show the need of this. The index to the present volume refers us to two papers on nicotine, but an interesting and somewhat important fact in the history of this alkaloid is mentioned in a "Note on the Active Principle of *Canabis* (*sic*) *Indica*," to which no reference is made under "Nicotine." The fact that the misprint "*Canabis*" reappears in the index is a sufficient proof that the latter is not the work of Mr. Siebold. Should a general index be decided on, we would commend to the compilers' notice the interesting little book just published by Sotheman & Co. on "What is an Index?" price 1s. Two things are greatly to be desired in modern works—conciseness and a good index. The Year-books are patterns of the first, the second can be added to them.

THE *Journal of Science*, edited by Mr. Crookes, F.R.S., which has appeared at quarterly for intervals the past fifteen years, is now published monthly.

It is said that the article on "Methods of Sick Relief" in the January number of *Macmillan's Magazine*, on which we had occasion to remark, was written by W. McCulloch Torrens, Esq., M.P.

AN interesting work has just been issued in Russia by Professor Rumishevich at Kieff. It is a complete catalogue of all the medicinal and veterinary literature published in Russia during 1876.—*Nature*.

WE have received from Mr. Thomas Christy, F.L.S., two pamphlets, entitled "New Commercial Plants, with Directions for their Growth and Utilisation." No. 1 deals with *Coffea Liberica*, or the new Liberian giant coffee; *Landolphia Florida*, or the African rubber tree; Turkish tobacco, and Caucasian prickly comfrey. No. 2 contains notices of the *chaumugra* tree, Vogel's African rubber tree (*Urostigma Vogelii*), the mahwah tree, and cocoa. There is a list at the end of new remedies and drugs. Most of the articles are illustrated with full-page lithographs. Mr. Christy is now well known as the energetic practical, if not strictly original, introducer of new plants, and the pamphlets he sends out contain a large amount of useful information. They are too business-like and practical not to call attention to the author's personal merits.

TEMPERANCE LITERATURE.—It is said that Dr. Richardson has been invited by the advocates of total abstinence to write an exhaustive reply to the strictures upon their system which have appeared in the *Monthly Review*.—*Publisher's Circular*.

IN Germany, during the year just passed, the total number of new books and new editions published was 13,912. The class of chemistry and pharmacy is fifth in order of numbers, 793 works on these subjects being issued during the year. Medicine and veterinary surgery follows very closely with 789 new publications.

WE have received a useful and interesting pamphlet, entitled "Personal Protection against Yellow Fever," from Dr. John A. Wegg, of Kingston, Jamaica. The author writes especially for the benefit of persons proposing to visit or take up their abode within the yellow-fever zone, and to such he offers a series of recommendations, based upon the experience gained by the many thousands who have already "acclimated" themselves.

ON March 1 the first number is to appear of a new journal, entitled *St. Luke: A Clerical, Medical, and Legal Review*. The object of the editors is "to endeavour to bring prominently before the general public matter which has hitherto been hidden in the obscurity of purely class journals." If this publication should become an authority we shall get confused when the newspapers tell us that *St. Luke* has declared in favour of counter practice or against, or has summarily settled some other like dispute.

A Book called "Medical Men and Manners of the Nineteenth Century" (Baillière, Tindal & Cox) has been sent to us, probably because it contains some silly abuse of chemists and druggists. The book is a wonderful mass of would-be funny criticisms on the various classes of medical practitioners, by an anonymous author who evidently failed to complete his apprenticeship to Lindley Murray, but who is quite prepared to undertake the enlightenment and reform of all the professions in the land. We are told that this is a second edition, "revised and very much enlarged." Whatever the revision may have done for it, the enlargement has certainly not proved an advantage.

THE "Patentee's Manual" (London: Longmans) is a complete treatise on the law and practice of patents, and describes all the steps of the process necessary in taking out letters patent, opposing them, licensing others to use them, proceeding against violations of them, and extending patent rights to other countries. The manual has reached a fourth edition, and is written by James Johnson, barrister, and J. H. Johnson, solicitor and patent agent, both authors having a special experience in patent law, which qualifies them for the work. The special value of the manual is that the comments or explanations given on all points connected with patent law are illustrated by the citation of cases and judgments. Several hundreds of cases are quoted or referred to in the course of the book. The laws regulating patents in foreign countries are given in an appendix, which has been considerably enlarged in this edition.

LATELY householders in the wealthier parts of London were favoured with a small volume, bound in green and gold, and entitled "Home Comforts." It contained a multitude of short articles on matters connected with everyday life, and on most pages an allusion to or recommendation of Nelson's patent gelatine or some other of that firm's specialties was introduced. It was, in fact, a simple advertisement skilfully prepared and likely to produce respectable results. The proprietors (Messrs. Nelson, Dale & Co.), as will be seen from an advertisement which they publish, ask chemists to assist them in the judicious distribution of this useful little volume: The opportunity is an excellent one for any chemist with a family connection, as any lady at the head of a household will be pleased to be presented with such a serviceable and interesting little manual.

A PAMPHLET, entitled "Abbreviated Notes on the Physiological and Therapeutic Action of *Gelsemium semper-virens*, and *Jaborandi*," by Thomas Stretch Dowse, M.D., plus seven lines of titles and three etceteras, comes to us "with the author's compliments." The most notable passages seem to be the title, the list of "Contributions to Medical Literature," by the same author, which fills the second and third pages of the cover, and the address of the writer on the last page. No indication of the author's aims is given, but the final sentence seems to indicate that the pamphlet is a reprint of a lecture. It criticises some of the results of Drs. Sanderson and Ringer, in many cases controverting their opinions. On page 8 the author says, "I think we may fairly say that *gelsemium*, as a therapeutic agent, exercises little or no power over either the circulation or respiration, whilst as a nerve sedative it seems to be of some value." On page 16 we are told, "I thought at one time we had a valuable agent in *jaborandi* to reduce the body temperature in phthisis, but further experience has taught me that it was fallacious." We will only notice further that *Gelsemium*, and not *Gelseminum*, is now fully recognised as the only correct orthography of the word.

THE OLDEST PHARMACEUTICAL PERIODICAL.—In 1825 was commenced the publication of the *Journal of the Philadelphia College of Pharmacy*, which is, therefore, the oldest pharmaceutical periodical in the English language. In 1827 it was resolved to issue it quarterly. In 1835 the title was changed to the *American Journal of Pharmacy*. In 1853 it was issued bi-monthly, and with the 43rd volume (1871) it was changed to a monthly. An index of the whole journal from 1825 to 1870 was published about this time. In April of this year the 51st volume will be commenced, the series beginning in 1827, when it was first issued at regular intervals. The history of the journal is that of the advancement of pharmacy in the States. One of the earliest contributors, Daniel B. Smith, who was also a member of the "publishing committee" appointed in 1824, still survives. Nearly all the men who have been the most brilliant lights of pharmacy in America have been in some way connected with the journal. Though not the most brilliant, it is still one of the best workers in the field it was the first to occupy in American pharmacy, and although it is older than any of its numerous rivals, we doubt not that it will be one of the last to expire. The present editor, Mr. John M. Maisch, is one of the most accomplished pharmacists in America, and is perhaps the most truly competent pharmaceutical editor in the world.

"ARTIFICIAL DISINFECTION" is the title of a very important pamphlet published by Messrs. Chnrhill, and written by the Rev. J. H. Timins, M.A., F.G.S., vicar of West Malling, Kent. Mr. Timins justifies his claim to write on a medical subject by explaining that he has had a regular medical education, including attendance on hospital practice as a medical student at St. Thomas's Hospital during four consecutive years. He appears to have made excellent use of the knowledge thus acquired. He has trained a staff of nurses, whose services have been offered in the various sanitary districts of Kent whenever there has been an outbreak of smallpox, scarlet fever, or diphtheria, and when accepted in time he declares that their efforts to circumscribe the disease by means of disinfection have never failed. The chief point is that the disinfection must be thorough and perseveringly continued. The rules observed by the nurses are to visit every infected house two or three times a day for the first fortnight, and once daily for six or eight weeks; to destroy all contagion by the immediate and complete disinfection of everything which has been near the patient: everything which he has touched or coughed upon; the furniture, bed clothes, floor, closets, &c.; to wash the patient with a disinfecting lotion; and to thoroughly fumigate his room after he has left it. A 2 per cent. solution of carbolic acid, and subsequent fumigation with sulphur, are the processes of disinfection which Mr. Timins advises. There is no doubt that a thoroughly efficient system of disinfection, promptly applied, would enormously reduce the record of deaths. How is it to be effected on a large scale? By many following the example which this clergyman has set.

"BURLINGTONIA" (London: Wyman) is a shilling's worth of more or less lively chat about Burlington House and the houses, streets, and squares surrounding it, with their historic reminiscences. The new Burlington House is devoted to the use of artistic and scientific societies, but its predecessor held a certain position among the aristocratic houses of London. Curiously enough it has almost always been occupied by men who were either amateur artists or patrons of artists, authors, or scientific men. One of the occupants of the mansion was Henry Cavendish, "le plus riche de tous les savants, et le plus savant de tous les riches." Cavendish's discoveries were so brilliant ("he weighed the earth, he analysed the air, he discovered the compound nature of water" *), that it is difficult to conceive of him as the plodding, patient worker which he was. And it is perhaps still more difficult to understand that this brilliant plodder was also a millionaire. He never realised the fact himself; for one day, when his bankers asked him whether he would not invest some thousands which were lying idle, he replied, "Do as you like; but don't bother me, or I shall remove my account." When the allied sovereigns visited London in 1814 they were entertained at Burlington House, and a little later Warren Hastings presided, in the same dining-room, at a grand banquet to the Duke of Wellington. It is well that, amid our present nineteenth century tinsel glories, we should be reminded occasionally of the giants who lived before us.



FRIENDS AND FOES.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I have been a frequent reader of your journal, and also of the *Pharmaceutical Journal*, and I am very much surprised to find the latter paper so stubborn and adverse in saying anything to protect the cause of the chemists and druggists. I am proud to say my father was a chemist and druggist, and through his exertions I was enabled to become a surgeon, and I can assure you, sir, I shall be one of the 1st medical men to try and exterminate a class of men (from whom many a surgeon of eminence sprang) because they happen to prescribe for a simple cold or sore throat, &c. It is simply monstrous to encourage such heartless conduct, to pay informers to swear to a lie; but I am convinced of the fact that the jealousy evinced towards chemists is chiefly taken up by the tail end of the profession. I know there are some few medical men (sons of chemists) who have taken up the cause against the chemists' prescribing, but these are very few indeed—perhaps men who have succeeded a little, and then turned their backs on their own fathers—on the very trade which brought them into their present position. I am glad to say I am not one of those unprincipled fellows. Wishing you success in your endeavours to protect a body of men who have been shamefully treated by some of the profession that ought to stand by them,

I am, sir, yours truly,
M.B. (Aberd.), L.R.C.S. Ed., A.A. Camb.
Midland Hotel, St. Pancras,
February 6, 1879.

THE FUTURE OF COUNTER PRACTICE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

R,—Now the Apothecaries' Company have withdrawn the appeal in Apothecaries' Company v. Shepperley, it behoves prescribing chemists to consider how they may successfully

repel that Wholesale Drug Company, with its solitary Act empowering it to grant a medical licence. Two ways have been suggested:—First, to elect on the Council of the Pharmaceutical Society men in favour of counter prescribing; secondly, by prescribing chemists combining and forming the 20th "College" New Faculty of Physicians and Surgeons, London. We glance at the former and see what might be suggested. It must be required from each candidate for a seat on the Council that he should prepare an address which the Secretary should have printed and sent with the journal three Saturdays before the day of election, then all who would not pledge themselves to protect our rights we should keep out by not voting for them.

And here I would say we have a right to prescribe. The successful opposition of the Apothecaries Act, 1813, and the compulsion brought on the promoters of the 1815 Act to introduce the saving clause; the failure of Mr. Hawe's Bill, the tenour of the 1858 Act, and the ejection of Dr. Lush's, and the two last medical Bills, go a long way to prove this. If it were a fact that this 1815 Act was sufficient, then why need they have troubled further? The fact is self-evident that, as the *Lancet* says, the *back door* of the profession is not sufficient, and we conclude by inference that the front door (1858) is insufficient also. The best thing for the profession is to make every man put on his door-plate the source of his diploma, and leave the public to judge for themselves. The necessary power already exists for punishing any one who may assume any title to which he has no claim.

I think from the suggestions I have already received there can be no doubt of the success of the second mode, "New Faculty of Physicians and Surgeons, London." Don't look at Owens College. We must do ours independently of the Medical Council or any examining body in connection with that Council. If carried out immediately registration on the medical register will be inevitable. Seeing we have been driven to enormous expense in defending Shepperley, and might have more vexatious prosecutions that way, we had better get beyond the 1815 Act by any available means. I purpose, by your permission, next month to publish some suggestions on this point. In the meantime, should any of your readers have anything to say on this point through you, Mr. Editor, I shall be glad to receive their remarks.

MOX DROIT.

DEAR SIR,—I hope the subject of counter prescribing will not be lost sight of until we have secured our position in a satisfactory manner. The difficulties by which it is surrounded are many and obvious; still, I think, a way might be found out of them. I think it is quite clear that no line can be drawn, except the distinction between counter practice and out-door visiting. It is evident that no definition can be given as to what constitutes a "simple case," and what does not; it must be left entirely to the discretion of the chemist, and we all know the consequences that would probably result from any great error on his part, consequences from which the Licentiates of the Apothecaries' Company are entirely protected; and in many cases it is well for them that they are so protected. I am not of the opinion that the P.M. licence need be raised to 20s., which is more than most chemists could afford to pay, considering the very limited amount of the sales. The old rate of 10s. would be more than sufficient to reimburse the revenue for the loss of the grocers, &c. In any case, I think we ought not to rest until we have secured to ourselves the sole right to deal in them.

I am, yours truly,
S. K.

CHLORIDE OF LIME AS AN INSECTICIDE.—*Le Cultivateur* remarks that rats, mice, and insects will at once desert ground on which a little chloride of lime has been sprinkled. Plants may be protected from insect plagues by brushing their stems with a solution of it. It has often been noticed that a patch of land which has been treated in this way remains religiously respected by grubs, while the unprotected beds round about are literally devastated. Fruit trees may be guarded from the attacks of grubs by attaching to their trunks pieces of tow smeared with a mixture of chloride of lime and hog's lard, and ants and grubs already in possession will rapidly vacate their position.

* Wilson's "Life of Cavendish."

Pharmaceutical Chemistry.

EXAMINATION OF COMMERCIAL SCAMMONY.

By J. Woodland, F.L.S., F.C.S., &c.,
173 Marylebone Road, N.W.

HAPPENING to test a sample of scammony, and finding starch and a large percentage of ash present, I obtained 10 other samples from both London and provincial chemists, and by testing obtained the following results:—

- Six samples contained large proportions of starch.
- Two samples contained only traces of starch.
- Seven samples contained 5 to 12 per cent. of ash.
- Two samples contained no starch, and only small percentages (3 to 3.5) of earthy matter.

I found no jalap, common, or guaiacum resin present in any of the samples. The starch granules, when seen under the microscope, were identified as those of wheat.

On estimation to ascertain the percentages of resin present, the following were the results:—

- One sample contained 58 per cent. of resin.
- Two samples contained respectively 69 and 75 per cent.
- Five samples contained from 76 to 81 per cent.
- Two samples contained respectively 81 and 83 per cent.

The percentages of resin were ascertained by boiling a weighed quantity of the sample in a test-tube with ether, pouring off the clear liquid on to a weighed filter paper (previously moistened with ether), again boiling residue with ether, pouring this clear liquid on to the weighed filter, and repeating this process a third time; the filter paper was then washed with ether, and the filtered ethereal liquids containing the resin having been received into a weighed vessel, the ether was evaporated by a gentle heat, and the increase in weight of the vessel noticed. The filter paper was then dried, and the increase in weight noted. The filter paper was weighed in order to confirm the percentage of resin obtained, the increase in weight of the filter and weighed vessel equalling the amount of the sample taken.

Scammony, it is stated, should form a white emulsion with water, but in the cases of the seven which yielded from 5 to 12 per cent. of ash the emulsions had a very dirty appearance.

Altogether I purchased 18 samples, but four supplied as scammony consisted of the B.P. compound scammony powder, and two of resin.

NOTE ON THE SYRUP OF THE PHOSPHATES.*

If the literature (we do not say chemistry) of the "Syrup of the Phosphates" has not been thoroughly threshed out, a practical note bearing on the precipitation of the phosphate of iron may possibly still be tolerated. Every maker of these preparations is aware how difficult it is to get a uniform precipitate of the phosphate of iron on mixing the solutions of soda and iron. Generally, the precipitate is obtained as a dirty greenish blue or greyish white gelatinous mass, very copious, and falling with difficulty, and by any ordinary process almost impossible to wash. Occasionally, but much less frequently, it is obtained in a white granular form, falling readily, and presenting every facility for quick washing and dispatch. We are not aware that the conditions determining the production of the precipitate in this last and most desirable form have been fully investigated. Mr. Howie (*THE CHEMIST AND DRUGGIST*, 1876, 119), and other writers since, have given somewhat elaborate instructions as to the temperature of the solutions previous to mixing, the mode in which they are to be mixed, and so on; and certainly more satisfactory, though not always uniform, results can be obtained with strict adherence to their directions than by other methods hitherto stated. To produce, however, a uniform granular precipitate with as much certainty as a chemical reaction has never been accomplished, even if the idea has been entertained, by anyone of this somewhat erratic substance. The following observations, if innumerable experiments do not lie, will determine the conditions

under which such a precipitate will be produced, and, if we mistake not, it will be found not difficult to reconcile the results with Mr. Howie's observations. Let the two crystalline salts—the granulated sulphate of iron and the phosphate of soda—be placed together in a suitable vessel, and hot water added barely sufficient to dissolve them. Let them be thoroughly stirred or shaken together until the crystals are dissolved, or nearly so, when more hot water may be added by degrees. We have paid little attention to the temperature of the water employed, being guided in this entirely by consideration for the glass vessel in which the experiments were usually conducted. But uniform results may be depended upon at any intermediate point betwixt 32° and 212° Fahr., with this exception: that when cold water is used the crystals dissolve very slowly, and the process is correspondingly tedious, and, moreover, is accompanied with considerable oxidation; whilst, on the other hand, if the water be boiling, the crystals dissolve very quickly, and the formation of the granular ferrous precipitate seems to be much finer and less perfect. It ought to be stated here that the formula used in the experiments from which the foregoing results were obtained was not the B.P., but the modification of the French Codex recommended in *THE CHEMIST AND DRUGGIST*, 1876, p. 292. This, shortly stated, consists simply in taking double the quantity of phosphate of soda to the sulphate of iron. A very long course of observations has determined this, in our estimation, to be the most satisfactory of all the methods of obtaining the phosphate precipitate in anything approaching to theoretical proportion; and, proceeding in the way just indicated, satisfactory results can scarcely fail to be obtained, not only as to the amount of precipitate, but also as to the form in which it will be presented.

OLEIC ACID AND OLEATES.

L. WOLFF states that even the purified oleic acid of commerce contains a considerable proportion of stearic acid, which materially alters preparations made with it. He has made very numerous experiments on the subject, and finds that the best way to obtain pure oleic acid is to saponify almond oil with lead oxide, as directed in the U.S. P., using 50 per cent. more of litharge to ensure complete saponification. The soap is dissolved in benzine, and after standing lead palmitate is deposited. The solution of lead oleate is shaken repeatedly with dilute HCl (1 to 7) to separate the lead, and warmed to expel the benzine. The oleates made with acid thus prepared are fluid and transparent, and do not gelatinise, while the oleostearates in common use are mostly thick and turbid. Oleic acid should be light yellow, readily miscible with alcohol of 92 per cent. in all proportions, without causing turbidity, not acted on by ammonium sulphide, and not congealing or depositing at the freezing-point of water. Oleates prepared with pure acid are best dispensed with one of the paraffin compounds, such as vaseline or ozokerine. They will probably be found better suited for hypodermic injections than compounds of any other acid. Pure oleic acid combines readily with alkaloids, but refuses to take up extractive and colouring matters. The author has found it useful in preparing pilocarpine from the leaves, in a short time and a comparatively pure condition. He considers that it may be made of much service in preparing alkaloids.—*Am. Journ. Ph.*, vol. li., p. 8.

DIALYSED IRON.

G. H. O. KLE finds that the most convenient apparatus for preparing dialysed iron on the small scale is a porcelain filtering basket (a funnel with perforated sides) placed in a column of water several inches long, which is level with the top of the basket. A septum of vegetable parchment well soaked in water, and folded like a filter, is placed in the basket and filled with the solution to be dialysed. The length of the column of water allows the solution of dialysed saline matters to fall to the bottom, and a supply of fresh water to take its place. To replenish the apparatus the water is drawn off, the septum pushed on one side, a funnel placed with its neck through one of the holes in the basket, and fresh water poured in. The best iron solution for dialysis is made by adding to 3 fluid ounces solution of chloride of iron (U.S.P.) 6 fluid ounces of water of ammonia (U.S.P.). If diligently stirred the mixture will become

* This note is in continuation of an article on the same subject which appeared in *THE CHEMIST AND DRUGGIST*, August, 1876.

clear in 20 minutes, and can be completely dialysed in 11 days. The finished product measured $16\frac{1}{2}$ fluid ounces, and contained 5 per cent. of solid matter. The above experiments were made with parchment paper measuring 248 square inches to 1 ounce avoirdupois at a temperature of between 70° and 95° Fahr. With paper measuring 560 square inches to 1 ounce avoirdupois, at a temperature between 40° to 70° , the dialysis was completed in five days. Well or hard water can be used instead of distilled water, without in the least affecting the quality of the product, and it is a convenient fact that when made from the solution mentioned above the finished product always contains 5 per cent. of solid matter.—*Am. Journ. Pharm.*

GUMMI RESINÆ VIA HUMIDA DEPURATA.

DIETZSCH writes in the *Pharm. Central-halle* that a colleague had told him that by dissolving gum-resins in turpentine, in an unpowdered condition, diluting with spirit of wine and straining, a purified resin was obtained, which was much freer from dirt than the purified resins obtained in the usual way by powdering the resin, and states that he had followed the plan on a large scale with much success. The only difficulty I found was in straining through a cloth, which I therefore replaced by a very fine-meshed brass sieve. The product he found much richer in specific odour, and this was attributed to the less exposure to the air. But in order to avoid any trace of turpentine, which after evaporation was still liable to cling to the resins, he says:—"I determined to purify the same by the wet process, with spirits of wine only, and without the addition of turpentine. I took in general 10 kilogrammes each of ammoniacum, galbanum, or asafoetida, which I put in the evening in an enamelled iron boiler, made firm in the water-bath, added 2.5 litres of 90 per cent. spirits of wine, and left standing over night. Next morning the bath was raised to 40° C., and the resins worked about with a wooden club for about three hours, till all were pulverised. An additional 2.5 litres spirits of wine were added, and the solution then obtained with the sediment rubbed through the brass sieve. The gum remaining on the sieve was dissolved in another 2.5 litres spirits of wine and passed through the sieve. The gum remaining after this process was very small, and of little value. The tincture was decanted, and the spirit evaporated at a temperature of 50° C., until there remained no smell of alcohol. The following were the separate results obtained:—From 1 kilogramme asafoetida and 10 litres sp. vin. was obtained 640 kilogrammes; residuum, 1.650 kilogramme; sediment, 1.20 kilogramme; loss, 0.690 kilogramme. With 10 kilogrammes ammoniac and 10 litres sp. vin., 8.000 kilogrammes; residuum, 1.250 kilogramme; sediment, 0.240 kilogramme; loss, 0.510 kilogramme. With 10 kilogrammes galbanum and 10 litres sp. vin., result 7.500 kilogrammes; residuum, 1.70 kilogramme; sediment, 0.360 kilogramme loss, 0.60 kilogramme. If we take into consideration that such a fine-meshed sieve as I use with the wet process cannot be used by pulverisation, and that a larger-meshed one would let through a great many foreign substances, without getting rid of them as I do by decanting; and that, besides, a considerable quantity of coarse sand would be sifted through with the gum-resin, it is evident that the preference must be given to the 'via humida' process. As by the pulverising process, however, to make the affair pay, only large quantities should be treated."

A GERMAN NOTE ON OZOKERINE.

HERZ's *Pharmaceutische Central-halle* says:—"About two years ago a preparation of American petroleum was introduced from New York under the name of 'vaseline.' It is a paraffinous substance of the consistency of somewhat soft lard, yellowish in colour, and translucent, and was strongly recommended as a substitute for lard for pharmaceutical purposes, and in the preparation of cosmetics. As this preparation is not subject to become rancid, it would be readily employed on account of this excellent property but the two important circumstances stand against its universal introduction. The first is, or was, the price, which is proportionately too high; and the second is the consistency, which is somewhat too soft, being in a hot summer almost semi-fluid, and admixture with yellow wax not to be thought of.

"We have lately received from Austria a preparation similar to vaseline, under the name *ozokerine*, also a paraffinous substance, which, on account of its excellent properties, may look forward to an introduction into the *Materia Medica* as a substitute for lard. This body, *ozokerine*, which the pharmacist may fittingly denote *axungia paraffinica*, has great resemblance to vaseline, but with neither of the drawbacks mentioned, since it is firmer in consistency, and the price is lower. In order to test the use of *ozokerine* in pharmacy and perfumery we have prepared various salves and pomades with it. In those ointments containing watery fluids (for example, iodide of potassium ointment) the translucency of the *ozokerine* is lost, and the mixture resembles a salve prepared with lard, except that instead of being pure white it has a tinge of yellow. Iodide of potassium not being decomposed by *ozokerine*, this ointment may be prepared without the addition of hyposulphite of sodium.* Iodide of potassium ointment prepared with *ozokerine* and placed aside in an open vessel for five weeks was at the end of that time as free from smell as when first prepared. A pomade perfumed with bergamot and tinged with a few drops of an alcoholic solution of rosaniline, and made hard and firm by addition of yellow wax, was similarly experimented with, and at the end of the same time remained unchanged. The virtue of not becoming rancid cannot be too highly valued. For the preparation of hard salves and pomades, which should not soon change, it is only necessary to use a pure beeswax. One would not, however, incorporate *ozokerine* with white wax, Japan wax, or ceresine, which Japan wax usually contains, these having a tendency to become rancid quickly. The use of *ozokerine* in place of lard for making up prescriptions we do not consider at present permissible."

SYRUP OF ORANGE PEEL.

M. YVON, in the *Journal de Pharmacie et de Chimie*, gives this formula, which he says yields an infinitely finer syrup than the Codex process gives. Take 400 grammes of bitter orange peel, freed from the white, and in ribbons, and 100 grammes of curaçao orange peel similarly prepared, all broken up in small pieces, and macerate in 500 grammes of alcohol at 60° for 12 hours. The tincture thus obtained (about 200 grammes) is to be poured off and preserved, the peel being lightly pressed in a linen bag. Then pour on the marc 5 litres of boiling water, and macerate in a closed vessel until it becomes cold (about 6 hours); pour off, press lightly through a linen bag, and make a syrup by dissolving in the liquid $9\frac{1}{2}$ kilos. of white sugar in a closed vessel. Filter through paper, and when nearly cold add the aromatic tincture first prepared from the peel. The product will contain about 1.5 per cent. of alcohol.

SYRUP OF CINCHONA.

THE same author suggests a process for this syrup to replace the formula of the Codex, acidulated water being employed instead of spirit as a solvent for the resinoids and alkaloids. Take 500 grammes of yellow cinchona, coarsely powdered, pour on it 3,000 grammes of water and 5 grammes of sulphuric acid, boil in a copper vessel for about an hour, or until a litre of water has evaporated, strain the liquor through a cloth, and repeat the boiling with 2,000 grammes of water, but with no acid. A third decoction may be made if the marc is still bitter. Finally, the marc is to be boiled for half an hour with 1,500 grammes of water containing 8 grammes of bicarbonate of soda. This decoction will be very high-coloured, as the alkali will dissolve the red quinovic acid. On mixing the several decoctions a neutral mixture will be obtained, which is to be concentrated (the author does not state to what extent.) A syrup to be made by dissolving in the liquid 5,000 grammes of sugar.

AN EASILY-CONSTRUCTED DIALYSOR.

M. HUIZINGA writes in the *Naturforscher*:—"The efforts to make dialysors of larger capacity have led to the application of a new membrane made from vegetable parchment. For the purpose rectangular bags made from parchment paper may be pasted together, using as glue a solution of gelatine containing 15 per cent., to which should be added 3 to 5 per cent. chromate of potash. In order to harden the glue the pasted bags are exposed to the air. The glue can

be kept in glass bottles made from opaque glass, but needs to be made warm before use each time. The upper openings of the bags are afterwards opened by frames, the bags are filled with the fluid which it is intended to expose to dialysis, and suspended side by side in a vessel filled with water. The water should be often renewed by letting it off at the bottom and refilling at the top."

A READY PROCESS FOR THE ESTIMATION OF OPIUM.*

M. A. PETIT describes a process which gives very accurate results in respect to morphia, and which does not occupy longer than two hours. Take 15 grammes of opium and 75 grammes of distilled water. Filter, and take 50 grammes of the liquid which passes this representing 10 grammes of opium; add 3 cc. of ammonia, and agitate. Morphia is rapidly deposited. After standing for a quarter of an hour add 27 grammes of alcohol 95°. After several agitations let the mixture stand half an hour. Then throw the whole on a tared filter, wash the alkaloid several times with alcohol at 50°, and afterwards wash and weigh.

SPIRITS OF WINE IN ETHEREAL OILS.

A. DRECHSLER (*Chem. Zeitzg.*) detects the above by means of a solution of 1 part acid chromate of potash in 10 parts of nitric acid of 1.30 specific gravity. With this reagent the presence of the smallest proportion of alcohol in ethereal oils may be traced, as, besides the well-known pungent smell of nitrous ether, at the same time a very characteristic change of colour occurs, varying according to the different ethereal oils. These changes of colour are best observed upon small watchglass-shaped porcelain shells.

LIQUOR FERRI DIALYSATI.

SCHNEIDER, of Basel, in the *Schweizerische Wochenschrift für Pharmacie*, prepares the above very conveniently as follows:—300 grammes of the commercial crystallised chloride of iron are dissolved in 1000 of distilled water, and 350.0 liquid ammonia are added very gradually, the solution at the same time being kept cool, waiting the while till the precipitated oxide of iron has again dissolved. Should a portion of the latter remain undissolved, the process is facilitated by adding a few drops of liquor ferri sesquichlor. The pure solution is afterwards put upon the dialysor, which swims in a tub of distilled water. The last is changed daily, and till the silver solution does not create a reaction in the strongly-diluted iron solution, and only produces a slight turbidity in the distilled water of the dialysor. The specific gravity is then determined and the product diluted with water to the required degree (5 per cent., 1.046 specific gravity). The result from 300 grammes ferr. sesquichl. cryst. is about 1,900 grammes, and for its production about 12 to 14 days are required.

TO TEST OLIVE OIL.

In order to find out if olive oil is adulterated with other fatty oils, Poutet gives the following process in the *Neue Wochenschrift für den Oel- u. Fettwaarenhandel*. First produce nitrate of mercury by dissolving 6 grammes of quicksilver in 7.5 grammes nitric acid from 38° to 46° B. in the cold. To 96 grammes of the oil to be tested, add 8 grammes of the nitrate of mercury, well shaking every 10 minutes during two hours. After 12 hours' rest the claudine shows itself in pure oil of a pale-yellow colour, and as a firm substance, while in adulterated oil the claudine appears orange or dark red, and is only partially, or not at all, solid. In order to see if olive oil is adulterated with sesame oil, shake two parts of the suspected oil at a temperature of 20° to 25° with one part of pure nitric acid of 20°, in which previously 0.05 to 0.1 gramme sugar has been dissolved. After a little rest the oil separates from the acid, and takes, if sesame oil be present, a rose colour. The more intense this colour the larger is the amount of the sesame oil present.

RECOGNITION OF MIRBANE ESSENCE IN CHERRY-LAUREL OIL AND BITTER-ALMOND OIL.

EASY though it appears, says Dr. Enrico Pegna, to distinguish cherry-laurel oil, or bitter oil of almonds, and nitrobenzin, when these substances are separated before us, the different methods of detection are less reliable when the question is to prove the existence of the deceptive nitro-

benzin in cherry-laurel oil. After mentioning the different researches of Chevallier, Maisch, Hoffmann, and others, Pegna gives the following reliable test:—To the cherry-laurel oil or bitter-almond oil to be analysed add a small quantity of alcohol, mix with this a solution of caustic potash in purified spirit of wine, and a few drops of chloride of iron solution. Leave this mixture for a few hours, then shake well and distil. A small part of the distilled oil is poured into a test-tube over a few pieces of caustic potash, and warmed over a lamp. If the oil is pure it remains uncoloured, as the *benzoylhydride* is converted into benzoate of potash and hydrogen. If, however, the oil is contaminated with mirbane essence (nitrobenzin), a dark colour is developed; and as, besides, by this reaction a small quantity of aniline is formed, if a few drops of solution of chloride of lime are poured upon the cooled mixture, they take a violet colour.—From "L'Orosi," in the *Pharm. Central-halle*.

QUINLE BIMURIATICUM CARBAMIDATUM.*

THIS new quinine salt is prompt in its effects and is useful in catarrhal and gastric fevers. It is distinguished for its easy solubility in water. Drygin gives the following formula for its production. One equivalent (396.5 parts) muriate of quinine is dissolved in one equivalent (about 250 parts) of muriatic acid of 1.07 specific gravity, by stirring in a porcelain vessel, and the solution is filtered. To this is added the equivalent (60 parts) pure urea, free from sulphate of ammonium. This is stirred about, dissolved by a gentle heat, stirring meanwhile, and the solution is placed immediately in a cool place for crystallisation. After 24 hours the formed crystals are placed on a filter, left to drain, and washed with very cold water, and afterwards dried on flat plates at ordinary temperature.

Trade Notes.

STRIKE AT RUNCORN.—A strike, involving 200 men, was in full operation at Runcorn at the beginning of February.

* *

MR. HOLLOWAY has found it necessary to warn Canadian druggists not to sell counterfeits of his famous pills manufactured at New York.

* *

PROPOSED COLONIAL EXHIBITION IN LONDON.—An influential committee has been appointed by the Royal Colonial Institute to consider the practicability of holding in London an exhibition of colonial products.

* *

VIOLET POWDER.—Messrs. G. F. Snook & Son, of 376 City Road, have asked our attention to their 1*l*. violet powder, on the wrapper of every packet of which they print a guarantee that it consists entirely of pure starch perfumed.

* *

UTILISATION OF THE DEAD SEA.—The Paris correspondent of the *Times* says that a native of Marseilles has purchased the right of extracting chlorate of potash from the Dead Sea, which he expects to be able to offer in London at 72*s*. a ton, whereas the present price of that article is 10*ls*. Evidently it is chloride of potassium which is here referred to. The greater part of this salt in commerce is at present obtained from Austria and Hungary. It is also yielded as a by-product in the manufacture of iodine from kelp, and in the beet sugar manufacture. It is used as manure, and also to a considerable extent in the manufacture of nitrate, sulphate, and chlorate of potash. Any such important reduction as that indicated by the *Times* would no doubt vastly increase the use of the salt in these manufactures and would lower the cost of all of them.

* *Journal de Pharmacie et de Chimie*, February, 1879.

* *Pharm. Zeitschrift für Russland*. (See C. & D. for November, p. 506.)

MESSRS. READE BROTHERS, of Wolverhampton, have dissolved partnership. Mr. W. J. Reade will continue the varnish business, and Mr. F. Reade will carry on the wholesale drug and manufacturing chemist's business.

* *

MR. THEODORE A. B. PIESSE has been admitted as partner into the firm of Piesse & Lubin, perfumers, New Bond Street. The firm will continue to trade under its old title, Piesse & Lubin.

* *

THE SILICATED CARBON FILTER COMPANY have, we understand, received large orders for a supply of pocket-filters for the troops now under orders for South Africa, most of which are to be made from a special design of one of the chief officers of the Horse Guards.

* *

DENTAL MODELS.—Mr. Gartrell, L.D.S., of Penzance, has found fine lubricating plumbago the most useful application to dental plaster models to prepare them for moulding in sand. The Patent Plumbago Crucible Company supply the right material.

* *

THE Army Medical Department has given out orders for a further supply of filters for use with the ambulances. The pattern selected is manufactured by the Silicated Carbon Filter Company, of Battersea, and is known as the "Silicated Carbon Ambulance Filter."

* *

EAU DE COLOGNE is an article which has been frequently sold under the inaccurate designation of quarts, pints, and half-pints. In conformity with the Weights and Measures Act these denominations must be avoided in all circulars, price-lists, or other advertisements.

* *

DUVAL'S SEVEN AGES MILK BALSAM is the title of a new preparation for the hair. It is a cooling and cleansing quid, and the hope of its popularity is, we suppose, based on the reputation which lime juice and glycerine has acquired when formed into a good white emulsion. Messrs. Cuthbert & Co. are the proprietors of this article.

* *

DO READY MONEY PAYMENTS OF 2*l.* AND UPWARDS NECESSITATE A RECEIPT STAMP?—That question has been submitted to the Board of Inland Revenue by the Secretary of the National Chamber of Trade, and the reply of the board is to the effect "that any note, memorandum, or writing whatsoever, whereby any money amounting to 2*l.* or upwards is acknowledged or expressed to have been received, which signifies or imports any such acknowledgment, is liable to stamp duty as a receipt."

* *

TROMMER'S MALT EXTRACT, which is now introduced to the English trade by Messrs. Lynch & Co., is one of the best of the various preparations of a similar character, and has gained a considerable reputation in the United States. It is of the consistence of thin honey or treacle, and has a pleasant flavour, rendered slightly bitter by a trace of hop. The medicinal action of malt in effecting the solution and digestion of starchy foods is a very reasonable one, but it can only have its proper influence if the extract is prepared without fermentation. Professor Redwood finds Trommer's extract has all the power of acting on amylaceous bodies which diastase possesses, and he considers the preparation has been made with great care and judgment. It forms a good emulsion with cod liver oil, and is offered in its simple form as well as in combination with cod liver oil, with psylline, with iron salts, and with hypophosphites.

SURGICAL INSTRUMENTS EXHIBITION.—The Cutlers' Company of London, in place of joining the central scheme for technical education, intend to devote special attention to improving cutlery, and, as a step in this direction, propose to hold in London, in May next, an exhibition of cutlery in all its branches, including surgical instruments and swords. A meeting to consider the matter was held in Sheffield on January 31. Those present were certainly not enthusiastically in favour of the scheme, and it was decided that nothing could be done immediately.

* *

RHAMNUS FRANGULA LOZENGES.—Abundant testimony to the value of the alder buckthorn as an aperient has been borne by many witnesses since Mr. Baildon, of Edinburgh, introduced it to English pharmacy in 1871. At the London Pharmaceutical Conference in 1874 Mr. Ince, Mr. Giles, and others spoke of it almost lovingly, and evidently from intimate acquaintance. Messrs. H. C. Baildon & Son have now prepared lozenges with the *Rhamnus frangula* as the active ingredient, and these are made tempting, after the style of the well-known French remedy, the Tamar Indien. We should think they are likely to become popular.

* *

THE CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION (Limited) has started business at Gifford Street, Caledonian Road, N. Mr. Horace Davenport, of 33 Great Russell Street, has accepted the Chairmanship of the Association. The system on which the Association proposes to work is exactly that which has made Co-operative Stores so successful, namely, no credit. Shareholders only can be customers, and to these the prices are remarkably low, 10s. per gross, for instance, for sodas. The list will be found among our advertisements. There is one sentence in the circular of the Association which curiously illustrates the view traders now take of professional analysts. We are told, "The waters will be submitted to Dr. Paul for analysis, and his report published in the form of circulars, which will be forwarded to each shareholder for distribution," &c. The author does not seem to contemplate the possibility of Dr. Paul giving an unfavourable report.

* *

KEPLER MALT EXTRACT COMPANY.—This new company was registered on January 17 with a capital of 3,000*l.* in 10*l.* shares. The company propose to purchase from Mr. Philip Embury Lockwood certain letters patent relating to an invention of "improved compounds of extracts of malt for medicinal purposes." The purchase consideration is a royalty of 1*s.* 6*d.* for each dozen bottles containing not more than 8 fluid oz., and 2*s.* 6*d.* on every dozen bottles containing more than 8, and not exceeding 16, fluid oz. Mr. Lockwood will also be entitled to one-third of surplus net profits remaining after payment of a dividend of 25 per cent. upon the ordinary share capital. The subscribers are Silas M. Burroughs, 8 Snow Hill, merchant, 100 shares; Philip Embury Lockwood, 24 Holborn Viaduct, manager of a company, 50 shares; Charles Frederic Gardner, 1 Worship Street, merchant, 50 shares; Theodore Young Kelly, 93 Great Russell Street, merchant, 1 share; Edmund Richard Southby, 101 South Hill Park, Hampstead, analytical chemist, 1 share; Laurence Briant, 63 Angel Road, Brixton, chemist, 1 share; Robert John Brae, 54 Belsize Road, clerk, 1 share. The number of directors is not to exceed five nor to be less than three; qualification 20 shares. The first three subscribers are the first directors. Each director is to receive 5*l.* per annum, and in each year in which 10 per cent. dividend is paid, 5 per cent. of the surplus profits will be divided amongst the Board. Mr. S. M. Burroughs is appointed first managing director.

ASBESTOS CLOTH.—We have seen a sample of a fabric made by an Italian firm from asbestos, and recently sent out to Mexico as a substitute for the leather used for the gloves worn by the men employed in the silver refineries. If this should be found to answer there are many purposes to which it might be applied in this country—as, for example, firemen's jackets, puddlers' gaiters, and so on.

**

WINDINGS-UP OF COMPANIES.—Drysaltory, Chemical, and Sanitary Company (Limited). Meeting, at H. Brown's, 7 Westminster Chambers, Middlesex. (Voluntary).—John Lomas & Co. (Limited). Resolved November 28:—That the company be wound up. (Voluntary).—Newcastle Chemical Manure Company (Limited). (Voluntary).—Soap and Chemical Works Company (Limited). Meeting, at H. H. Ashworth's, 3 Copthall Buildings, London. (Voluntary).—Petroleum Company of Italy (Limited). Petition presented in the Court of Chancery December 17 by H. W. O. Grobecker, 46 Queen Victoria Street, London, and heard by Vice-Chancellor Malins on January 17. E. Beall, 46 Queen Victoria Street, solicitor.

**

THYMOL SOAP.—The value of thymol as an antiseptic or disinfectant has not been disputed, and so much testimony exists as to its efficacy that we cannot doubt it will, before long, come largely into commerce. It has been particularly recommended as a useful application, in the form of ointment, in skin diseases, and its combination with soap is therefore likely to be a convenient and pleasant means of preserving in health the hands and face. As thymol is readily soluble in oils, and as it also possesses in itself an agreeable odour, a soap made with it seems to be very naturally suggested. Messrs. Ferris & Co. have carried out the idea in a style which it will be hard for any competitor to beat. The soap is put up in boxes, containing three 6d. tablets each, wrapped in tinfoil. It is very fragrant. The show-card sent out by Messrs. Ferris & Co. is admirable, both in design and execution, and is worthy of a position in any pharmacy. It is the work of Messrs. Robinson, a Bristol firm, who well deserve to be thus mentioned.

**

BRONCHITIS KETTLE AND ROBSON'S INHALER.—We have had frequent occasion to notice the various sanitary appliances introduced by Messrs. J. Allen & Son, of Marylebone Lane. Their portable Turkish baths, bronchitis kettles, and some other arrangements have become fairly well known. The same firm has now made a kettle which will suffice in many cases of bronchitis for the supply of warm moist air simply. The kettle is almost like an ordinary one, and may be used for any purposes, but with it is supplied a long tube, which may be fitted into the spout so as to conduct the



warm vapour to an invalid when required. A new inhaler introduced by this firm is an economical, unbreakable, and effective one. The engraving shows its construction. The liquid to be inhaled, containing medicament, is put in the vessel, which is provided with a glass mouthpiece attached

to the lid, which is made to fit air-tight. The secondary drawing represents a cover, which drops loosely over the air-chamber in the inhaler. On inspiration at the mouthpiece a vacuum is caused in the upper part of the vessel, and the air, passing through the holes round the bottom, passes up the chamber and is conducted to the bottom of the inhaler, thus passing entirely through the medicated liquid.

TRADE CHANGES.

MR. ARTHUR BUSWELL succeeds to the business of Mr. William Sturge, Lutterworth, the latter removing to Leicester.

MESSRS. E. CRAWSHAW & Co., aniline dye merchants, notify their removal to extensive premises in Fann Street, Aldersgate Street.

MR. TODD, of Sunderland, has purchased the business of Mr. Scott, Hylton Road, Sunderland. Mr. Brett, of Leicester, valued for the vendor.

MR. J. W. SKELTON, of Reading, has purchased the business of Mr. C. Matthews, of Ashwell, through the agency of Mr. Brett, Leicester, who valued for both parties.

MESSRS. ALBRIGHT & WILSON, Chemical Works, Oldbury, announce that the second son of the senior partner, Mr. G. S. Albright, B.A., has been received into partnership.

THE partnership existing between Messrs. J. Smith & F. J. Clarke, of Lincoln, in the proprietorship of "Pectorine," has been dissolved, and the business will in future be carried on by the original inventor, Mr. J. Smith, alone.

MR. JOHN AULT, Eastwood, Notts, has sold the business established and conducted by himself many years, as chemist, oil and colour merchant, and mineral water manufacturer (through the agency of Mr. Brett, of Leicester, who valued for the vendor), to Mr. J. H. Knowles, of Reading, who still retains his business at Reading. Mr. Maltby, of Lincoln, valued for the purchaser.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontaine-moreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Applications for Letters Patent:—

Alkalies.—No. 339.—W. Weldon, of Rede Hall, Burslow. Improvements in the manufacture of alkalies, being improvements in desulphurising crude solutions of soda and potash, and in obtaining and regenerating an agent to be used for that purpose. Dated January 28, 1879.

Bottle-stoppers.—No. 218.—C. F. Wool, of Sheffield, and J. Wilkinson, of Swinton. Improvements in the stoppering of bottles, and in apparatus for adapting bottles thereto. Dated January 20, 1879.

Condensing Organic Substances.—No. 187.—F. Wirth.—A communication from C. Neuss, Wiesbaden, Germany. An improved method of reducing organic substances containing nitrogen, such as food of different kinds, blood, meat, and the like substances, to a powder unaffected by the atmospheric air. Dated January 16, 1879.

Disinfectants.—No. 33.—R. V. Tuson, of the Royal Veterinary College, Great College Street, Camden Town. Improvements in the preparation of materials to be used as disinfectants, deodorisers, and antiseptics, as well as for the destruction of parasites infesting man and the lower animals, and similar purposes. Dated January 3, 1879.

Dental Plates.—No. 156.—W. R. Lake.—A communication from G. N. Winderling, of Milan, Italy. An improved process and apparatus for the manufacture of dental plates. Dated January 14, 1879.

Phosphates of Lime, Enriching.—No. 179.—W. R. Lake.—A communication from C. de la Roche, of Paris. Improved processes and apparatus for enriching phosphates of lime by the separation of carbonate of lime from their gangue. Dated January 15, 1879.

Iodine, &c., Extracting from Seaweed.—No. 56.—H. B. Barlow.—A communication from J. N. J. Dubrenil, of Paris. An improved process for extracting iodine, bromine, and other salts from sea wrack or seaweed. Dated January 4, 1879.

Instruments for Examining the Interior Parts of the Human Body.—No. 153.—J. C. Mewburn.—A communication from Dr. M. C. F. Nitze, of Vienna. Improved instruments or means to be employed in illuminating and examining internal parts or cavities of the human or animal body. Dated January 14, 1879.

Magnetic Appliances and Garments.—No. 371.—L. M. Becker, of Peckham. Improvements in magnetic appliances and garments. Dated January 29, 1879.

Measuring and Packing Powdered Substances.—No. 157.—W. R. Lake.—A communication from the Cleveland Paper-box Machine Company, of Cleveland, Ohio. An improved packing machine, chiefly designed for measuring granular, powdered, or other like substances and small articles, and for putting up the same in boxes, bags, and other receptacles. Dated January 14, 1879.

Pill-box.—No. 91.—A. Martin, 13 Store Road, Bedford Square. A new match or pill box. Dated January 9, 1879.

Soap.—No. 300.—C. D. Abel.—A communication from J. Barbieux and A. Rosier, of Marseilles. A new or improved process for the saponification of mineral oils and the manufacture of benzine soap. Dated January 24, 1879.

Aluminium Sulphate.—No. 173.—S. Baerlein.—A communication from F. Laur, Paris. Improvements in the manufacture of sulphate of alumina. Dated January 15, 1879.

Treating Excreta.—No. 114.—H. Whitley, Birchwood, Rusholme. Improvements in apparatus for the treatment of house and town refuse and excreta. Dated January 10, 1879.

Iron Oxide.—No. 354.—A. Watt, 29 Christchurch Terrace, Battersea Park Road. Improvements in treating red oxide of iron, for the purpose of obtaining therefrom certain useful products. Dated January 28, 1879.

Sulphurous Gases.—No. 189.—A. H. Allen, York. Improvements in the treatment of sulphurous gases, and in the means employed therefor. Dated January 16, 1879.

Sewage Utilising.—No. 437.—W. H. Denham, Southsea. Improvements in the construction of sewage works, and in utilizing and disposing of sewage, house refuse, and scavenged matters. Dated February 3, 1879.

Colouring Matter.—No. 43.—F. Wirth.—A communication from F. Graessler, of Cannstadt, Wurtemberg. Improvements in the manufacture of a yellow colouring matter from benzol. Dated January 3, 1879.

Letters Patent have been issued for the following:—

Little-stoppers.—No. 2771.—W. P. and C. E. Cherry, both of Porter Street, Hull, Yorkshire. Improvements in stoppers for bottles and similar articles, and method of closing and opening the same, and moulds for making stoppers. Dated July 10, 1878.

Little-stoppers.—No. 4713.—J. Worthington, of Blackpool, Lancashire. Improvements in apparatus for stoppering bottles. Dated November 20, 1878.

Colouring Matters.—No. 2811.—J. A. Palst, of 41 Boulevard St. Michael, Paris, and A. C. Girard, of 20 Rue des Ecoles, Paris. Improvements in the manufacture of colouring matters, and of products from which colouring matters may be obtained. Dated July 13, 1878.

Dental Plates.—No. 3300.—R. Brewster, of 25 Broad Street, Golden Square, London. Improvements in apparatus for the treatment of celluloid and vulcanite in the manufacture of dental plates and other articles moulded under heat and pressure; also applicable to other useful purposes where pressure is to be applied in a closed chamber. Dated August 21, 1878.

Filters.—No. 3036.—F. Wirth.—A communication from L. Albert, engineer, of Worms, Germany. Improvements in universal quick filters. Dated July 31, 1878.

Manure.—No. 4804.—J. Brown, of Elm Croft Grange, Edinburgh, North Britain. Improvements in the production of manure. Dated November 26, 1878.

Malt Extract.—No. 4192.—P. E. Lockwood, of 24 Holborn Viaduct, London. New or improved medicinal compound of extract of malt. Dated October 21, 1878.

Purifying Liquids.—No. 2695.—G. Mackay, of Edinburgh, North Britain, manufacturing chemist. Improvements in the purification of liquids, and in the utilisation and preparation of certain and by-products of art and manufacture as purifying agents. Dated July 5, 1878.

Sulphuric Acid.—No. 4131.—C. Norrington, of Plymouth, Devonshire. Improvements in apparatus employed in the manufacture of sulphuric acid. Dated October 17, 1878.

Tannic Acid.—No. 2948.—F. G. Vedova, of Smyrna, Turkey. Improvements in the manufacture and application of certain materials containing tannic acid, tannin, gallic acid, or the like, and the utilisation of certain raw products for the purpose. Dated July 24, 1878.

Sulphuric Acid.—No. 3182.—R. Lavender, of Mold, and J. Richards and D. Williams, both of Pontypool, Monmouthshire. Improvements in treating waste sulphuric acid that has been used for pickling iron plates and other articles of iron or steel. Dated August 12, 1878.

ABSTRACTS OF SPECIFICATIONS.

FOR permission to print the following we are indebted to the courtesy of the *Engineer*:—

2203. Alkalies, Caustic, MANUFACTURE OF, &c., E. W. Parnell and J. Simpson.—Dated June 1, 1878. 6d.

This relates to improvements on patent No. 4144, of the year 1877, and consists of effecting an economy of fuel by using a closed vessel or agitator fitted with mechanical means of agitation, and supplied with steam from a boiler.

2224. Ammonium Chloride, PRODUCTION OF, W. Gentles.—Dated June 3, 1878. 4d.

Any ammoniacal liquor containing carbonates of ammonia is distilled into a solution of calcium chloride. The carbonic acid of the ammonia carbonate combines with the calcium of the chloride of calcium and the oxygen of the ammonia, the result being the production of muriate of ammonia and carbonate of lime.

2298. Boxes, Paper, E. T. Hughes.—Dated June 8, 1878.—(A communication.) 6d.

The box consists of a principal side with flaps and tongues, the whole being folded from a single piece.

2392. Carboys, J. H. Johnson.—Dated June 15, 1878. (A communication.) 6d.

The carboys are manufactured in two parts, formed of metal, stamped, hammered, or bent by any suitable means, according to the form required, and united by overlapping or interlocking, soldering, bolts or rivets as found most convenient. It is preferred to employ plain or galvanised sheet iron, or sheet iron lined with lead or enamelled.

2308. Charcoal, OBTAINING VEGETABLE, W. Holtmann.—Dated June 8, 1878.—(Not proceeded with.) 2d.

This consists in taking plants or mosses of the genus sphagnum, and drying them in the open air or in sheds, or artificially. It is then carbonised in retorts or heated cylinders, and afterwards pulverised or reduced to grains of the required size.

2237. Feeding Bottles, N. Kelly.—Dated June 4, 1878.—(Not proceeded with.) 2d.

The stopper is divided lengthwise into two or more sections, which are held together by the neck of the bottle. The teat unscrews off the flexible tube.

2189. Foot-rot in Sheep. COMPOUND FOR PREVENTING, F. W. Daltly. more.—Dated May 31, 1878.—(Not proceeded with.) 2d.

The compound consists of perchloride of mercury or bichloride of mercury, arsenious acid, sulphate of copper, chloride of sodium, protoxide of sodium, either used separately or together in combination with water.

2231. Gas, Purifying, C. W. Heaton.—Dated June 4, 1878. 6d.

The gas is washed by a spray of gas liquor or water, introduced into the condenser or scrubber through which the gas passes.

1919. Nitroglycerine—EXPLOSIVE COMPOUNDS, T. S. Huntley and R. W. Kessel.—Dated May 14, 1878.—(Void.) 2d.

About 450 parts by weight of sulphuric acid and 350 parts of nitrate of soda are employed to produce a mixed acid, $8\frac{1}{2}$ lbs. of which is mixed with 1 lb. of glycerine, forming nitro-glycerine. A greater or less quantity of this nitro-glycerine is mixed with or absorbed by highly roasted and fine pulverised plaster of Paris.

2221. Phosphate of Potassa or Phosphate of Soda, MANUFACTURE OF, F. Wirth.—Dated June 3, 1878.—(A communication.)—(Not proceeded with.) 2d.

This consists in manufacturing phosphate of alkali and sulphur out of sulphates of alkali by means of phosphoric acid.

2182. Phosphoric Acid and SUPERPHOSPHATES, MANUFACTURING, F. Wirth.—Dated May 31, 1878.—(A communication.) 4d.

In the dissolution of the finely-powdered phosphorites by sulphuric acid, and in separating the phosphoric acid in solution, a mechanical mixing apparatus is employed, so that the phosphorite powder cannot sink to the bottom, thus counteracting the action of the sulphuric acid, as is often the case with hand manipulation.

EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

- Specie jars, 15 inches high, metal caps. 38/272.
- Tincture press and root-cutter, cheap. M. M., 28 John Street, Bedford Row, W.C.
- Eleven gallon jars Wood's mixture for sheep; offers wanted. Vincent, Chemist, Truro.
- Fine-toned violin, splendid case, two bows; 8 guineas. Webb, Chemist, Calne.
- One-gallon tincture press, in good condition. Newbold & Mason, Chemists, Nottingham.
- Sixty lbs. powdered orris root; what offers? 77 Denmark Hill, Camberwell.
- Massive ornamental gas shop-stove for sale, cheap. Ford, Pontypool.
- Cheap, an aquarium and fern case combined, suited for gentleman's hall. Apply, 8/265.
- What offers for "Encyclopædia Britannica," 1797, 18 vols. complete? 10/200.
- Pharmaceutical Journal*, first four years of new series, complete and perfectly clean; what offers? Brailsford, Battle.
- Nine dozen Barrow Evans' hair restorer, perfect condition, 8s., carriage paid, or lot for 7s. 6d. per dozen. 38/260.
- Large iron ointment mortar, with long pestle, on stand; two 4-gallon window carboys and stands. Provost, Peterborough.
- No. 1 Bushby's rotary pill-machine, complete, good as new, will exchange for good microscope, or offers. 36/263.
- Four 16-gallon pear-shaped carboys, cut-glass stoppers. Price 3*l.* each; or what offers? 244/33.
- Scott's cigarettes, 10*l.*s., 11 2*s.*, clean; 13*s.* the lot; carriage paid. Jones, Chemist, Wavertree, Liverpool.
- Ten new Wedgwood mortars, funnel, tubing, books, and sundries; cash or exchange. R. C. Mason, Bromsgrove.
- Sikes' hydrometer, by Loftus, good as new, price 2*l.* H. J. Jackson, Pharmaceutical Chemist, Bridlington Quay.
- Hooper's "Medical Dictionary," by Grant, 8th edition, scarce, 12*s.* 6*d.* Hay, Chemist, 4 Regent's Terrace, Hull.
- Six Lambert's Scott's pills; also several Holloway's, King's, and others; 13½*d.* size, 7*s.*; 2*s.* 9*d.* size, 20*s.* 32/272.
- Eighteen one-gallon black store bottles, perfect, with caps, 6*d.* each, and other chemist's things, cheap, to get out of way. 29/276.
- Tincture press, half gallon, on iron stand, quite new, 17*s.*; Squire's "Companion," new, 6*s.* 6*d.* Harriman, Chemist, 133 Browlow Hill, Liverpool.
- Botany, the official and all the ending wild plants (100), mounted, classed, and named, 7*s.* 6*d.*; 150 materia medica specimens, 5*s.* Tully, Chemist, Tanbridge Wells.
- A chemical balance, Oertling's best, quite new, with weights, spirit level, &c., complete, cost 10 guineas; for cash. W. Luff, 2 Walton Crescent, Oxford.
- About 36 1-gallon black store bottles, as figure 3, Maw's, gold-labelled, ebonized stoppers; also quantity M'Leod's dip; offers wanted. W. G., Sittingbourne, Kent.
- Two gross thorough genuine sauce, in 4-oz. bottles, in cases, three dozen in each, very attractively labelled; offers wanted. Halls, Chemist, Newark.
- Four 250-gallon cisterns, cost 5*l.* 10*s.* each, will take 2*l.*; also weighing-machine (3 cwt.), cost 2*l.* 10*s.*, will take 1*l.* Sykes, Great Barr Street, Birmingham.
- Six oz. Howard's quinine, 12*s.* oz.; 6 oz. Savory's ditto, 11*s.* oz.; also 1 cwt. shellac, price 9*d.* lb.; sample sent. H. Matthews, Post Office, Ipswich.
- No. 4 soda-water machine, new gas-work last year; half-chromometer gold watch, by Saulet, Paris, original cost, 12*l.*, will sell cheap. 27/286
- Dentists' vulcanizer, with two flasks and clamps, thermometer, all complete, just as good as new, 35*s.* Richard Cockcroft, Mytholmroyd.
- A Bargain.—Entire fittings of a chemist's shop, first quality, modern and nearly new; must be sold. Apply, William Dodds, 12 Hesse Road, Hull.
- Pharmaceutical Journal*, from 1866 to 1878 inclusive; *Chemist and Druggist*, from 1875 to 1878 inclusive. What offers, in cash or scientific apparatus? S. E., 60 Navarino Road, Dalston.
- Two mahogany-top counters, window enclosure, shelving, carboys, bottles, jars, in fact, the entire fittings for small chemist's shop; also set of books, pill-machine, scales, &c.; in one lot, cheap, or separate for prompt cash. A. R. Awbery, Henley-on-Thames.
- Glass cases, mirrors, window fittings, specie jar on stand with handsome lid, small pear-shaped globes, bottles, jars, &c. Address, Jones, 16 Jamaica Row, Birmingham.
- Fergusson's "Surgery" and Barff's "Chemistry," new, for Wills' "Manual of Vegetable Materia Medica," 10*s.* 6*d.*, must be in good condition. C. J. Bennett, Waterloo Road, Widnes.
- Fifty tins Scott's smoking mixture, 2*s.* 6*d.* size 35 tins, 1*s.* 3*d.* size; 3 dozen cigarettes, 2*s.* size; 3 dozen 1*s.* size. No reasonable offer refused. Matthews, Chemist, Ashby-de-la-Zouch.
- Dog, very handsome and thorough bred, silver blue on fawn, Yorkshire terrier, good follower and very affectionate, three years old, invaluable for stock; 25*s.*, well worth 5*l.* R. Halford, New John Street, Birmingham.
- 48-inch "Challenge" bicycle, light roadster, half bright, bolted-nut spokes, and improvements, cost 14*l.* new; also 30*s.* Southall's "Cabinet" in good condition. What offers? Williamson, 7 Market Place, Spalding.
- Chemist and Druggist* for 1874 and 1875, complete; also 1871, February missing; 1873, May, July, and August ditto; 1876, November ditto; all clean and in good condition. What offers? C. W., 5 Gloucester Terrace, South Norwood.
- 56 lbs. Cape aloes, lump, 3*d.* lb.; 1 cwt. mag. sulph. large crystals; 2 cwt. venetian red; Dr. Batchelor's fever powders, 1*s.* 1½*d.*, 3*d.* doz.; 2*s.* 9*d.* size, 4*s.* doz.; large show case for dentist, cost 6*l.*, for 23*s.* Mr. Adams, 54 Oxford Street, Salford.
- Capital seed mill; quantity of 40-oz. stoppered rounds, narrow mouth; jacketed iron steam pan, enamelled inside, for syrups, on legs, about 10 gallons; brass pillar scales, on mahogany stand, 20 in., drawer underneath. Moore, Chemist, Cbeiltenham.
- One gross 1*d.* squares white gutta-percha, 4*s.* gross, 3 dozen sent for 12 stamps post free; pill machine, cuts 24, price 10*s.*; 7 lbs. powder jalap, V. C., 1*s.* 6*d.* lb.; drugs or patents taken in exchange. R. J. Spenceley, 149 Oxford Street, E.
- Minor Students—50 questions asked of a successful candidate, 1*s.*; 30 prescriptions given to dispense at the Minor, 1*s.*; Hints how and what to study, by a successful student, 1*s.*; 50 illegible prescriptions, 2*s.* 6*d.*; 60 mounted indigenous plants, 5*s.* "Chemist," care of Mr. Edwards, London House, Petham, Canterbury.

Thirty 1s. Barrow Evan's Restorer; 10 8d. Lane's American Sabiner; 2 1s. Gishurst Compound; 2 1s. Aphis Wash; 40 6d. London Relish; 3 5s. and 3 8s. "Micro-Ethereon" respirators; 50 lbs. gum acacia (Indian). Hill, Cleveland Terrace, Bath.

What offers for *Pharmaceutical Journal*, posted every Sunday? For sale.—Royle's "Materia Medica," fifth edition, 12s. 6d., for 7s.; Muter's "Materia Medica," 5s. 6d., for 3s.; Lindley's "School Botany," 13th edition, 3s.; British Pharmacopoeia, 3s.; Steggall's "First Lines," 2s. H., 5 Colonnade, Buxton.

Pulvermacher's galvanic waist belt and spine band, nearly new, 30s.; two bent plate-glass mahogany counter cases, 22 inches long, 13 inches broad, 7 inches high; 19 inches long, 13 inches broad, 8 inches high, 25s. each net in Sunderland, as Maw's figs. 7 and 8, one glass shelf in each. Sharp, Chemist, Sunderland.

The entire fittings of a small country shop, cheap; also part fittings of a shop, 18 feet by 14 feet; a 6-foot dispensing screen, with mirror in centre and slab, for 7l.; a great variety of secondhand cases of all sizes, upright and flat; also a large lot of oil cisterns. R. Tomlinson, 15 St. Paul's Square, Birmingham.

The *Pharmaceutical Journal*, every week, half-price and postage; "Food," by Dr. E. Smith, 2s. 6d.; "The Laryngoscope," by Sir D. Gibb, 2s.; Rutter's "Human Electricity," 2s.; Dr. Wegg's "Science and Art of Medicine," 2s.; a 24-pill machine in good condition, and iron cork-presser, 10s.; 1 dozen and 11 quart syphons, oval shape, 2s. each. 34/263.

To sell or exchange for drugs, patents, or sundries, a surplus stock of fittings, dispensing screen, half circular case (3 feet high), two mirror stands, bottles, jars, drawers, gasfittings, gallon stock bottles, upright cases, bent glass counter cases, brass and iron counter scales, tea mill, coffee mill, and one splendid flat counter case, nearly new. S. Parker, 360 Leeds Road, Bradford.

Removing from the Premises.—Nests of drawers, window enclosures, glazed cases, shop jars all sizes and colours, show bottles, specic jars, store bottles, pill machines, and every requisite; also medical books, surgical instruments, tohacconists' show-cases, jars, &c.; several articles of capital furniture, viz., six mahogany chairs (hair seats), two elbows to match, mahogany table, large feather beds, bolsters, pillows, bedsteads, and other household effects; list sent, all cheap to save removing. Sewing machine, 2l. On view at 294 Old Kent Road, London, S.E.

1s. 1½d. Dredge's healall, 1s. 3d.; 9 1s. 1½d. Beetham's plasters, 5s. 7d.; 4 1s. 1½d. Sawyer's plasters, 2s. 6d.; 11s. 1½d. Simco's gont pills, 7d.; 6 1s. 1½d. Parr's pills, 3s. 9d.; 3 1s. 1½d. Dixon's ditto, 1s. 11d.; 5 1s. 1½d. George's No. 2 gravel pills, 3s. 2d.; 2 1s. 1½d. George's pile pills, 1s. 3d.; 1 2s. 9d. Woodcock's pills, 1s. 6d.; 2 2s. 9d. Holloway's pills, 3s. 4d.; 3 2s. 9d. Whelpton's pills, 4s. 6d.; 3 2s. 9d. W. Welch's pills, 5s.; 2 2s. 9d. Davis' pain-killer, 3s. 4d.; 3 2s. 6d. Leeming's essence, 4s.; 2 4s. 6d. Holloway's ointment, 5s. 6d.; 2 2s. 6d. Atkinson's bear's grease, 2s. 6d.; 2 1s. Boud's ink, 1s.; 5 6d. ditto, 1s. 3d.; 6 1s. Godfrey's cordial, 3s.; 1 4s. 6d. Henry's magnesia, 2s. 9d. Page, Chemist, Barnstable.

Watts' "Dictionary Chemistry," five volumes, cost 7l. 3s., price 5l.; Fresenius' "Qualitative Analysis," 10s.; Erichsen's "Surgery," two volumes, cost 32s., 1l.; Didlay's "Infantile Syphilis," 5s. 6d.; Curtis's "British Dipthera," 107 colored engravings, insects and their plants, cost 5l. 3s., 3l. 5s.; West's "Diseases—Infancy, Childhood," cost 16s., 10s.; Makin's "Manual Metallurgy," cost 12s., 8s.; others. Priestley, Alresford, Hants.

Two 2-ft. long, 3 3-ft. long, 1 3-ft. 6 long, 4 4-ft. 10 long, 5 6-ft. long, 2 9-ft. 8 long, 1 10-ft. long, 1 12-ft. long, 1 13-ft. long, 1 17-ft. long, 1 19-ft. 4 long nests mahogany-fronted gold-labelled shop drawers with black and glass knobs; 1 10-ft. long, 1 12-ft. long, 1 14-ft. long, 1 16-ft. long, 1 18-ft. long nests mahogany-fronted gold-labelled shop drawers with lockers under, shelving and cornice above, forming complete fittings as 190, 191, 196, 197 Maw's; 18 retail and dispensing counters, all sizes, fitted with drawers, &c.; 3 nests counter drawers; 2 label chests, as 26 Maw's; 1 4-ft. long, 1 4-ft. 6 long, 1 5-ft. long, 1 6-ft. long, 1 7-ft. long handsome mahogany dispensing screens, as figs. 40, 163, 164 Maw's, and 136 Treble's; 38 bent, flat, and upright mahogany counter cases; 5 upright mahogany counter cases, with desk; 6 mahogany window enclosures; 9 mahogany wall cases, with and without cupboards under; 5 mahogany shop chairs; 2 mahogany show stands; 2 soda-water stands; 60 pear-shape window show carboys; 14 handsome specic jars, with royal arms, &c.; 3,600 gold-labelled shop bottles, all sizes; 1,500 gold-labelled shop jars; 400 gold-labelled brown earthenware jars, with japan covers, all sizes; 230 black glass upright and carboy-shape store bottles, with japan and gilt caps; 180 blue square bottles; 450 marble, composition, iron, and glass mortars and pestles, all sizes; 7 tincture presses; 5 pill machines; quantity plate-glass shelves; 4 shop lamps, as figs. 2, 3, 9, and 15 Maw's. Lloyd Rayner, 333 Kingsland Road, London, N.

FORMULÆ.

Chlorodyne, for retail and dispensing, equal to any in the market; formula, with full directions, sent for 5s. in stamps. 33/223.

Gouorrhea mixture, a most valuable remedy, never fails, and profitable; condition powders for horses, also cleansing drenches for cows, recommended by the principal veterinary surgeons; Shepherd's red pectoral cough mixture, very effectual, and commands a very extensive sale; either of the above recipes 2s. 6d., or two for 4s. "Medicins," 12 Marine Parade, Folkestone.

Chilblain liniment.—Chemical brass paste; composition for cleaning harness; French polish reviver; restorative cream (prevents hair turning grey), liquor sennæ comp.; liquor opii sedat.; oleum flavæ cone. (3j. to 1℔.); brilliantine (inseparable); fragrant foaming dentifrice (similar to Floriline); chemical food (improved formula, keeps well); magic neuralgic drops (never-failing remedy); pearly white pill coating; glycerine jelly (transparent); Kaloderma, or skin beautifier; cherry tooth paste (never ferments); marking ink (black or red); cement (equal to Coaguline); balsam elder flowers; aqua camphor. conet. 1 in 16; with many others, send stamp for list; the above are prepared and sold by a West-end firm; inexpensive to prepare and command ready sale; 5s. each (five for 1l.), letters only. "Analyst," 79 Gaisford Road, N.W.

Pain-killer similar to the great American remedy, fruit salt, tie pills, nerve pills. The above are *bond-fide* remedies, any of which will be forwarded for 5s. each, or the four for 15s. "A. B.," 6 Commercial Road, Weymouth.

WANTED.

Photo glass studio. Wehh, Chemist, Calne.

Works on dental surgery, perfect and clean. State lowest price. 22/272.

A strong 1 or 2 gallon tincture-press. Smith, Chemist, Rye.

Pharmaceutical Journal, 2nd series, vol. 3 to end, cheap, bound. 51/15.

A good label chest; send full particulars to Henry Pattison, Chemist, Shrewsbury.

A Homœopathic Pharmacopœia, 1870 edition, or later one if published; state price. 270/1.

Dental chair, tooth forceps. Jones, Chemist, Wavertree, Liverpool.

Upright mahogany glass counter case; send size and particulars. G. Briggs, Chemist, Goolce.

Thorpe's "Qualitative Analysis," and a set of French gramme weights. J. Kershaw, Chemist, Southport.

Second-hand fitting of chemist's shop, in good condition. Apply, X. Y. Z., 92 Fitzroy Street, Cambridge.

Latii "London Pharmacopœia," with pocket edition translation. T. D., Chemist, Hirwain.

Samuel Moore & Co.'s bronchial cigarettes, state price. Macfarlane, Chemist, Wishaw, N.B.

Hanbury's "Pharmacographia," in good condition. Richardson, 77 Lord Street, Southport.

Bell-metal pestle and mortar, in good condition, about 12 inches diameter at mouth. Lowest price to E. Worth, Bournemouth.

Dentists' lathes, vulcanisers, tooth forceps, teeth tools, and everything for dentists' use, in large or small quantity. Owen Jones, Apothecaries' Hall, Bangor.

Stoppered rounds, 48 8-oz. n.m., 24 30-oz. w.m., 36 4-oz. or 6-oz. blue earthenware jars, caupoy tops. B. Waddington, Thornton, near Bradford.

Three galvanised iron oil cisterns, 80 to 90 gallons, must be square or oblong, and not to exceed 2 feet from back to front. A. Parker, Chemist, Uttoxeter.

Six or 8 doz. 3-oz. n.m. stoppered bottles in exchange for Cupis's balls, or quote lowest price; would exchange mahogany show cigar-case. "Chemist," 28 High Street, Elgin.

INFORMATION WANTED.

Addresses of Albert Frankel (German), artist, Professor Lewis, chiropodist. Vincent, Chemist, Truro.

Address of E. R. Body, horsedcaler, late of Lenham, Kent. Keall, High Street, Sittingbourne.

William Willson, commission agent, late 200 Clowes Street, West Gorton, Manchester. Nicholson, Chemist, Liucolu.



WHAT are the stages of disease?—Ill, pill, bill.

WHAT are the stages of success?—Get on, get honour, get honest.

THE OLIVE CROP.—Advices from Bari (Naples) state that the last olive crop is so abundant that the dealers say a similar one has never been seen either for quantity and quality.

WHAT is the difference in the treatment of a child by its mother and a doctor? One whacks an' loves it, the other vaccinates it. What an un-Jenner-us thing, says the *Druggists' Advertiser*, to say of vaccination!

AN IRISHMAN said his physician stuffed him so with medicine, that he was sick a long time after he got well. This was the same man that told his physician, who had written him a prescription for an emetic, "that it was no use to give it him, he could not keep it down."

A GRAND ILLUSTRATION.—A lecturer on chemistry said: "To illustrate how elements that are perfectly harmless in themselves may become destructive by combination, take the case of a gun and a small boy. What can be more harmless than each of these when alone by itself? or can be more dangerous in combination?"

AMERICAN COMPETITION.—Professor J. Gibbons Hunt, M.D., of Philadelphia, in a recent lecture, stated that, in his opinion (and he is one of the most experienced microscopists in the United States), it is affectation or stupidity for Americans to send to Europe for microscopes when they can purchase better ones at home.

LOCAL ANÆSTHETIC.—A correspondent of the *Dental Cosmos* says that by applying a plug of cotton to the gums surrounding a tooth to be extracted until the gums turn white, the operation can be performed with very little pain. The anæsthetic is—

| | | | | | | | | | |
|-----------------|----|----|----|----|----|----|----|----|------|
| Camphor | .. | .. | .. | .. | .. | .. | .. | .. | 3iv. |
| Sulphuric ether | .. | .. | .. | .. | .. | .. | .. | .. | 3j. |

BEST BLACKING FOR BOOTS AND SHOES.—Ivory black, 1½ oz.; treacle, 1½ oz.; sperm oil, 3 drachms; strong oil of vitriol, 3 drachms; common vinegar, ½ pint. Mix the ivory black, treacle, and vinegar, then the sperm oil and oil of vitriol separately, and add them to the other mixture. This will be found an excellent and useful receipt.—*Leather Trades Circular*.

STEEL which has rusted can be cleaned by brushing with a paste made of ½ oz. of cyanide potassium, ½ oz. of castile soap, 1 oz. of whiting, and water sufficient to form a paste. The steel should first be washed with a solution of ½ oz. of cyanide potassium in 2 oz. water. To preserve steel from rusting, a good method is to paint it with melted caoutchouc, to which some oil has been added.

The following story of French origin is worth repeating. In a large town there were three brewers in the same street competing with each other; one put out a sign, on which was painted the words: "A . . ., the best brewer in France;" the second, inscribed in gold letters upon an extra large signboard, "B . . ., the best brewer in the world;" the third modestly placed on his sign the words "C . . ., the best brewer in the street."

LADY ANALYSTS.—Mrs. Frances Hoggan, M.D., at a recent meeting of the Ladies' Debating Society read a paper on the "Microscope, as a Recreation and Employment for Women," in the course of which she suggested that women might find lucrative employment as analysts, or, as they were termed, "housekeeper's detectives." If women only studied the subject carefully, there was no reason why they should not form an independent body of analysts, either visiting houses themselves or receiving specimens of food to examine at their own especial homes.

WATER soft is my first; water hard is my second; sticks made of my whole are by many sweet reckon'd. Liquor-ice.

"KERITE," a kind of artificial caoutchouc, is the invention of Mr. Day, of New York, and is made as follows:—To produce 100 parts by weight of kerite, 27 parts of cotton oil and 30 parts of oil-tar are heated together in a cauldron for several hours, at a temperature of about 150° C. After this has been done, 30 parts of linseed oil, 12 parts of sulphur, and 5 of ordinary wax or of solid paraffin, are added. The whole is then heated for five or six hours, at a temperature under 150° C., to prevent carbonisation. It is then allowed to cool, and is moulded into blocks convenient for future purposes. The price is about one-third of the natural caoutchouc. Mr. Day received honourable mention for kerite insulated telegraph core, exhibited at the Paris Exhibition.

PETROLEUM AS AN INSECTICIDE.—Mr. William Taylor speaks almost enthusiastically in the *Journal of Horticulture* of the virtues of petroleum as a murderer of "mealy bug, scale, and the terrible red spider." Put a wine-glass of petroleum on a gallon of water. Then make two or three squirts with a syringe into the vessel containing the mixture, and then immediately one syringe full over the plant, and afterwards alternately squirting one into the vessel and one on the plant, it will be kept sufficiently mixed for all practical purposes. Thus used it will kill red spider and all but the very oldest scale, although its shelly covering has become somewhat hardened, while it will not injure the tenderest ferns. "I have no mealy bug to try it on, but from what I have heard I have not the least doubt of its effect on that terrible pest." The application beats hollow all the old recipes for killing insects.

IMITATION EBONY.—The following recipe, which we take from the *Revue Industrielle*, will answer to turn oak black so as to cause it to resemble ebony. The wood is immersed for 48 hours in a hot saturated solution of alum, and then brushed over several times with a logwood decoction prepared as follows:—Boil 1 part of best logwood with 10 parts of water, filter through linen, and evaporate at a gentle heat until the volume is reduced one-half. To every quart of this add from 10 to 15 drops of a saturated solution of indigo, completely neutral. After applying this dye to the wood, rub the latter with a saturated and filtered solution of verdigris in hot concentrated acetic acid, and repeat the operation until a black of the desired intensity is obtained. Oak thus stained is said to be a close as well as handsome imitation of ebony.



THE first month of the New Year certainly gave no sign of improved business, but we hear in several quarters of indications of better trade since February set in. These may be delusive, however, as they have so often been before, and only the accidental arrival of a few orders together, so that not much reliance can be placed upon them. Looking at the published records of trade for January we find that our imports show a decline of more than 4,000,000*l.*, or nearly 14 per cent. If values of the goods imported were the same as last year this would mean an alarmingly diminished consumption, but to a not inconsiderable degree it is due to lower prices all round, especially for cereals, so that to that extent the reduction has a favourable appearance. Our exports exhibit a further decline of about 1,250,000*l.*, or about 8 per cent. less than in January, 1878, on the whole extent of British trade.

Symptoms of improvement are visible in the heavy chemical trade. In several instances for early delivery makers have been able to establish fractionally improved rates, and it may be said that soda and its salts are decidedly firmer than last month. The volume of trade is not yet large, but inquiries are much more frequent, and it is anticipated that the freedom of navigation which may very soon occur will cause a more general demand. This will

rapidly affect prices, because stocks are certainly now lower than they have been for years, and considerable reductions in the production of alkalis have been made both voluntarily and involuntarily of late. Bleaching powder, soda crystals, and bicarbonate and the potash salts would be the first to respond to an increased demand. If the Plague *should* pass the Russian frontier a rush on the stocks of the first of these articles is more than probable.

Citric and tartaric acids and cream of tartar are now remarkably low, and for the present there is but little demand for either. Some buyers who use large quantities have, however, laid in their summer stocks, on the anticipation of advancing prices as the spring comes on. The reports respecting the crop of lemons are very contradictory, but some of these are, no doubt, manufactured for the market.

English quinine has been lowered twice, and is now quoted at 11s. 3d. French is less freely obtainable at present, and is quoted 11s. 9d. to 12s. 3d. The universal favour of E.I. marks was strikingly exhibited in the bark sales this week, when South American kinds, which were in limited supply, were comparatively neglected, and were sold at generally easier prices, red only fully maintaining its position, while a large quantity of East Indian, mostly Government grown, which was put forward, realised prices up to 10s. per lb. for some special lots. The following were the various prices made. Columbia and New Granada, good ordinary, 2s. 6d.; middling to good, 3s. to 3s. 9d.; fine, 4s. 3d. to 4s. 6d. Some bought in up to 6s. 3d. Carthagena made, for ordinary, 4. 4d. and 1s. 5d.; fair sorts, 2s. 2d. to 2s. 9d.; good to fine, 3. 3d. to 4s.; red, sea damaged, siftings at 1s. 1d., ordinary qualities, 3s. 1d. to 3s. 10d., and some fine bold 8s. 1d. The E.I. sorts realised from 1s. 3d. to 4s. 3d. for Ceylon; Madras, mostly Government grown, was bought at 5s. 8d. to 5s. 11d. for crown mossy quill, 7s. 1d. to 8s. 1d. for quill without moss, 9s. 1d. to 9s. 4d. for fine pale flat renewed, and a few special lots 10s.

Iodine is firm at 1s. 1d., but bromine and bromides are again cheaper, bromide of potassium being sold at 1s. 8d.

CAMPHOR.—The stock is increasing, though still much below the average. No deficiency is, however, now anticipated, and a further reduction has occurred.

Quicksilver has again been lowered to 125s. per bottle. The bottle was sold at last drug sales for 6l.

Opium has a rising tendency, and some fluctuations may be fairly expected in this drug between this and when the character of the new crop becomes reliably known. Some Persian opium of good quality was put up at the last sales, and bought in at 14s. 9d.

The new essences of lemon and bergamot have come to hand, and are of good quality and rather cheaper. Oil of rose is declining to its previous price; otto of roses is in good supply, and is again cheaper; and American oil of pepper mint is still quoted at a low figure.

Cubebes have been in demand, and have advanced to 55s., holders now declining that price.

Coca leaves were bought in at last sales at 1s. 1d., Buehu at 1 1/2d. to 1s. 6d., Matiao at 10d., and Singapore Patchouli at 8d. Jaborandi is wanted, and not on the market. Tinnevely senna made 5d., and 5 1/2d. for good middling; fair to good Tinnevely is worth 9d. or 10d.; Alexandrian fair picked was bought in at 1s. 2d.

Aloes are cheaper for Cape and Barbadoes, but Socotrine is wanted, and commands good prices.

Opaba has now become less abundant, and advancing prices may be expected.

JAFFRON.—French reports assure us that there is a considerable deficiency in the supply, and a speculative movement in London has forced up the price considerably.

The Dalmatian insect flowers have become very dear, and an advance of 1s. per lb. in insect powder is the result.

The first indigo sales for the year were held the middle of January, and, in consequence of higher rates at Calcutta, better prices were confidently expected here. A large quantity was put down for sale, but on the first day the low demand proved to be much below the average, and owners withdrew freely. This caused more competition on the second day, and the result was an average about equal to previous prices. Bengal and Madras marked a 1d. or 2d. advance. Oudes and Kurpahs were about the same price.

Shellac has been largely bought, and an advance of 2s. or 3s. has been established. Some speculation has taken place in turmeric, which has been dealt in up to 25s. for fine Cochin. Cochineal has been bought readily, and an improvement of 2d. per lb. has been realised for Mexican and Teneriffe.

Isinglass has made slightly better prices for East Indian and Brazil, but West Indian shows a trifling reduction.

OILS.—Linseed has been firmer, and is still rather higher than last month, but it is not now at its highest point. The latest reports indicate an upward tendency. Rape oil is steady and quiet. Olive oil is in but slight demand, but is somewhat firmer, especially for Gallipoli oil, which is not so abundant as was confidently expected. There have been some tendencies towards a speculative movement in the Sicilian and Neapolitan markets, and it is believed that when the demand does come much higher prices will rule. Some olive oil has been bought in Sicily for February, 1880, at 3l. per tun above present quotations, in the belief that a short crop will follow the present abundant one. An export duty on Italian oil has lately been abolished, but the effect of this has been balanced by a greater demand, which has sprung up since the beginning of February. Fish oils are still declining. Turpentine is rather higher, 22s. 3d. being now realised for American spirit. Petroleum has steadily declined all the month, and has been bought during this week at 7 3/4d.

| | Stocks Jan. 31 | | Imports Jan. 31 | | Deliveries Jan. 31 | |
|------------------------------|-------------------|--------|--------------------|-------|-----------------------|-------|
| | 1879 | 1878 | 1879 | 1878 | 1879 | 1878 |
| Aloes.....cs | 2,379 | 2,207 | 358 | 381 | 320 | 214 |
| ".....kegs | 11 | 14 | — | — | 1 | — |
| ".....gourds | 302 | 2,100 | 31 | 25 | 84 | 234 |
| Aniseed, Star.....cmts | 616 | 979 | — | 120 | 18 | 102 |
| Arrowroot.....cks | 12,847 | 12,219 | 126 | 87 | 1,212 | 1,179 |
| ".....bxs & tins | 6,246 | 6,284 | 20 | 352 | 941 | 642 |
| Balsam.....cks, &c. | 66 | 166 | — | — | 38 | 22 |
| Bark, Medicinal.....cks, &c. | 565 | 939 | 87 | 241 | 224 | 471 |
| ".....srns, &c. | 11,085 | 12,457 | 5,946 | 4,479 | 3,415 | 2,820 |
| Borax.....pkgs | 1,160 | 1,021 | 325 | — | 225 | 12 |
| Bees' Wax.....bls & srns | 917 | 497 | 12 | 1 | 77 | 58 |
| ".....cks & cs | 1,820 | 1,438 | 160 | 172 | 82 | 105 |
| ".....cakes | 27 | 9 | 34 | 100 | 34 | 99 |
| Wax, Japan vegetable, pkgs | 4,967 | 6,199 | 483 | 70 | 172 | 185 |
| Camphor.....pkgs | 1,139 | 4,033 | 703 | — | 336 | 472 |
| Cardamoms.....chts | 209 | 506 | 58 | 25 | 83 | 90 |
| Cocculus Indicus bgs, &c. | 1,635 | 2,413 | — | — | 60 | 23 |
| Colombo root.....pkgs | 738 | 586 | 451 | 24 | 261 | 55 |
| Cream of Tartar.....cks | 93 | 101 | 19 | 19 | 9 | 30 |
| Cubebes.....bgs | 167 | 275 | — | — | 3 | 19 |
| Dragonsblood.....chts | 109 | 135 | 2 | 6 | 10 | 9 |
| Galls, E.I.....cks & cs | 4,101 | 2,432 | 279 | — | 1,577 | 730 |
| Mediterranean.....cks | 841 | 831 | 53 | 237 | 118 | 20 |
| Gum— | | | | | | |
| Ammoniac.....pkgs | 469 | 536 | — | 58 | 4 | 5 |
| Animi & Copal..... | 5,218 | 8,449 | 675 | 431 | 1,560 | 452 |
| Arabic, Barbary..... | 1,182 | 1,068 | 172 | 208 | 266 | 161 |
| Turkey..... | 328 | 575 | 104 | 163 | 225 | 57 |
| E.I..... | 1,606 | 2,506 | 123 | 750 | 309 | 416 |
| Assafoetida..... | 276 | 248 | 3 | — | 38 | 54 |
| Benjamin..... | 1,173 | 1,093 | 94 | 180 | 68 | 51 |
| Damar..... | 1,358 | 90 | 232 | 9 | 319 | 182 |
| Galbanum..... | 19 | 35 | — | — | — | — |
| Gamboge..... | 186 | 160 | 38 | 6 | 19 | 12 |
| Guaiaacum..... | 10 | 36 | 2 | — | 7 | 1 |
| Kino..... | 11 | 13 | — | 1 | — | — |
| Kowrie.....tns | 928 | 1,073 | 289 | 266 | 171 | 183 |
| Mastic.....pkgs | 165 | 150 | 7 | 27 | 3 | 1 |
| Myrrh, E.I..... | 115 | 261 | 15 | 8 | 27 | 7 |
| Olibanum..... | 1,549 | 3,899 | 556 | 1,107 | 305 | 165 |
| Sandarac..... | 1,205 | 575 | 130 | 221 | 158 | 124 |
| Senegal.....tns | 17 | 12 | — | 2 | — | — |
| Tragacanth.....pkgs | 1,554 | 280 | 654 | 125 | 154 | 42 |
| Ipecacuanha.....cks & bgs | 246 | 271 | 41 | 11 | 31 | 52 |
| Jalap.....bls | 450 | 508 | 11 | — | 14 | 29 |
| Nux Vomica.....pkgs | 4,602 | 1,220 | 572 | — | 239 | 27 |
| Oil— | | | | | | |
| Castor.....cks | 3 | — | — | — | — | — |
| ".....cs | 5,140 | 2,710 | 3,006 | 2 | 2,267 | 872 |
| Palm.....tns | 1,105 | 601 | 189 | 167 | 38 | 181 |
| Cocoanut..... | 1,959 | 2,747 | 689 | 618 | 337 | 627 |
| Olive.....cks, &c. | 472 | 973 | 232 | 163 | 247 | 489 |
| Aniseed.....cs | 69 | 190 | 47 | — | 19 | 47 |
| Cassia..... | 231 | 703 | 36 | — | 2 | 30 |
| Opium.....chts, &c. | 1,199 | 1,832 | 167 | — | 107 | — |
| Rhubarb.....chts | 1,266 | 1,061 | 81 | 133 | 58 | 90 |
| Sarsaparilla.....bls | 908 | 1,323 | 123 | 210 | 130 | 109 |
| Senna.....bls, &c. | 1,742 | 3,390 | 429 | 274 | 120 | 124 |
| Shellac.....ch, &c. | 41,386 | 41,088 | 1,012 | 4,053 | 2,979 | 2,632 |
| Terra Japonica, Gambier tns | 3,273 | 2,270 | 921 | 1,577 | 694 | 1,086 |
| Cutch..... | 3,026 | 2,532 | 24 | 352 | 290 | 108 |
| Turmeric..... | 2,120 | 1,216 | 570 | 415 | 184 | 140 |

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

| CHEMICALS. | | 1879. | | 1878. | |
|--|------------|-------|--------|-------|--------|
| ACIDS— | | s. d. | s. d. | s. d. | s. d. |
| Acetic | per lb. | 0 2½ | to 0 0 | 0 2½ | to 0 0 |
| Citric | per lb. | 1 11½ | 2 0 | 2 3½ | 2 3½ |
| Hydrochloric | per cwt. | 5 0 | 7 0 | 4 0 | 7 0 |
| Nitric | per lb. | 0 4½ | 0 0 | 0 4½ | 0 0 |
| Oxalic | per lb. | 0 4½ | 0 4½ | 0 4½ | 0 5 |
| Sulphuric | per lb. | 0 0½ | 0 1 | 0 0½ | 0 1 |
| Tartaric crystal .. | per lb. | 1 4½ | 1 4½ | 1 4½ | 1 5 |
| powdered .. | per lb. | 1 4½ | 1 4½ | 1 4½ | 1 5 |
| ANTIMONY ore | per ton | 240 0 | 300 0 | 240 0 | 300 0 |
| crude .. | per cwt. | 36 0 | 0 0 | 37 0 | 0 0 |
| star | per cwt. | 46 0 | 48 0 | 50 0 | 51 0 |
| ARSENIC, lump | per cwt. | 25 0 | 0 0 | 26 0 | 0 0 |
| powder | per cwt. | 9 0 | 10 0 | 10 0 | 0 0 |
| BRIMSTONE, rough .. | per ton | 100 0 | 102 6 | 110 0 | 115 0 |
| roll .. | per cwt. | 9 6 | 10 3 | 9 6 | 10 6 |
| flour | per cwt. | 10 6 | 13 0 | 11 6 | 13 6 |
| IODINE, dry | per oz. | 1 1 | 0 0 | 0 10½ | 0 0 |
| IVORY BLACK, dry .. | per cwt. | 8 6 | 0 0 | 8 6 | 0 0 |
| MAGNESIA, calcined .. | per lb. | 1 10 | 0 0 | 1 10 | 0 0 |
| MERCURY | per bottle | 125 0 | 0 0 | 145 0 | 0 0 |
| MINIUM, red | per cwt. | 16 9 | 17 0 | 20 6 | 0 0 |
| orange .. | per cwt. | 28 6 | 0 0 | 33 0 | 0 0 |
| PRECIPITATE, red .. | per lb. | 3 3 | 0 0 | 3 7 | 0 0 |
| white .. | per lb. | 3 2 | 0 0 | 3 6 | 0 0 |
| PRUSSIAN BLUE .. | per lb. | 0 0 | 0 0 | 0 0 | 0 0 |
| SALTS— | | | | | |
| Alum | per ton | 120 0 | 122 6 | 135 0 | 140 0 |
| powder | per ton | 140 0 | 0 0 | 152 6 | 0 0 |
| Ammonia: | | | | | |
| Carbonate | per lb. | 0 6½ | 0 6½ | 0 5½ | 0 5½ |
| Hydrochlorate, crude .. | per ton | 600 0 | 720 0 | 580 0 | 720 0 |
| British (see Sal Am.) .. | per ton | 365 0 | 375 0 | 420 0 | 430 0 |
| Sulphate | per cwt. | 75 0 | 82 0 | 75 0 | 82 0 |
| Argol, Cape | per cwt. | 52 0 | 70 0 | 67 0 | 73 0 |
| Red | per cwt. | 32 0 | 33 0 | 32 6 | 33 0 |
| Oporto, red .. | per cwt. | 60 0 | 65 0 | 69 0 | 65 0 |
| Sicily .. | per cwt. | 60 0 | 65 0 | 69 0 | 65 0 |
| Ashes (see Potash and Soda) .. | per cwt. | 5 9 | 0 0 | 6 3 | 0 0 |
| Bleaching powd. | per cwt. | 27 0 | 34 0 | 0 0 | 0 0 |
| Borax, crude | per cwt. | 35 6 | 36 0 | 36 0 | 37 6 |
| British refined .. | per cwt. | 2 11 | 0 0 | 3 2 | 0 0 |
| Calomel | per lb. | 2 11 | 0 0 | 3 2 | 0 0 |
| Copper: | | | | | |
| Sulphate | per cwt. | 18 3 | 18 6 | 20 0 | 20 3 |
| Copperas, green .. | per ton | 50 0 | 55 0 | 55 0 | 60 0 |
| Corrosive Sublimat. p. lb. | per lb. | 2 3 | 0 0 | 2 7 | 0 0 |
| Cr. Tartar, French, p. cwt. | per cwt. | 100 6 | 101 6 | 98 0 | 99 0 |
| brown .. | per cwt. | 80 0 | 82 6 | 0 0 | 0 0 |
| Epsom Salts | per cwt. | 4 3 | 6 0 | 4 3 | 6 0 |
| Glauber Salts | per cwt. | 3 0 | 4 6 | 3 0 | 4 6 |
| Lime: | | | | | |
| Acetate, white, per cwt. | per cwt. | 11 0 | 20 0 | 11 0 | 20 0 |
| Magnesia: Carbonate .. | per cwt. | 47 6 | 0 0 | 47 6 | 0 0 |
| Potash: | | | | | |
| Bichromate | per lb. | 0 4½ | 0 5 | 0 3½ | 0 4 |
| Carbonate: | | | | | |
| Potashes, Canada, 1st sort | per cwt. | 25 6 | 0 0 | 23 0 | 0 0 |
| Pearlshades, Canada, 1st sort | per cwt. | 35 6 | 36 0 | 30 0 | 0 0 |
| Chlorate | per lb. | 0 6 | 0 6½ | 0 7½ | 0 8 |
| Prussiate | per lb. | 0 11½ | 0 11½ | 0 10½ | 0 11 |
| red .. | per lb. | 1 7½ | 1 8 | 1 8 | 1 9 |
| Tartrate (see Argol and Cream of Tartar) | | | | | |
| Potassium: | | | | | |
| Bromide | per cwt. | 1 8 | 0 0 | 0 0 | 0 0 |
| Chloride | per cwt. | 6 6 | 0 0 | 0 0 | 0 0 |
| Iodide | per lb. | 16 0 | 16 6 | 13 6 | 14 0 |
| Quinine: | | | | | |
| Sulphate, British, in bottles | per oz. | 11 3 | 0 0 | 10 0 | 0 0 |
| Sulphate, French .. | per oz. | 11 6 | 11 9 | 9 0 | 0 0 |
| Sal Acetos | per lb. | 0 6½ | 0 7 | 0 7 | 0 0 |
| Sal Ammoniac, Brit. cwt. | per cwt. | 44 0 | 45 0 | 42 0 | 43 0 |
| Saltpetre: | | | | | |
| Bengal, 6 per cent. or under | per cwt. | 18 6 | 18 9 | 21 0 | 22 0 |
| Bengal, over 6 percent. per cwt. | per cwt. | 17 6 | 18 3 | 20 3 | 20 6 |
| British, refined .. | per cwt. | 23 6 | 24 9 | 25 0 | 27 0 |
| Soda: Bicarbonate, p. cwt. | per cwt. | 8 10½ | 9 0 | 9 6 | 9 9 |
| Carbonate: | | | | | |
| Soda Ash | per deg. | 0 1½ | 0 0 | 0 1½ | 0 1½ |
| Soda Crystals per ton | per ton | 62 6 | 65 0 | 70 0 | 0 0 |
| Hyposulphite, per cwt. | per cwt. | 0 0 | 0 0 | 0 0 | 0 0 |
| Nitrate | per cwt. | 13 0 | 0 0 | 15 3 | 15 6 |
| SUGAR OF LEAD, White cwt. | per cwt. | 38 0 | 0 0 | 37 0 | 0 0 |
| Brown, cwt. | per cwt. | 26 6 | 0 0 | 26 6 | 0 0 |
| SULPHUR (see Brimstone) | | | | | |

| | | 1879. | | 1878. | |
|---|------------|----------|-------|---------|-------|
| VERDIGRIS | | per lb. | s. d. | per lb. | s. d. |
| VERMILION, English .. | | 2 3 | 0 0 | 2 8 | 0 0 |
| China .. | | 2 3 | 0 0 | 2 0 | 0 0 |
| DRUGS. | | | | | |
| ALOES, Hepatic | per cwt. | 65 0 | 170 0 | 80 0 | 180 0 |
| Socotrine .. | per cwt. | 80 0 | 210 0 | 85 0 | 200 0 |
| Cape, good .. | per cwt. | 36 0 | 38 6 | 40 0 | 42 0 |
| Inferior | per cwt. | 32 0 | 35 0 | 35 0 | 39 0 |
| Burbaodes .. | per cwt. | 60 0 | 190 0 | 40 0 | 160 0 |
| AMBERGRIS, grey | per oz. | 47 0 | 70 0 | 80 0 | 90 0 |
| BALSAM— | | | | | |
| Canada | per lb. | 0 0 | 0 0 | 0 9 | 1 1 |
| Capivi | per lb. | 1 4 | 1 8 | 1 4½ | 1 6 |
| Peru | per lb. | 4 8 | 4 9 | 4 6 | 4 9 |
| Tolu | per lb. | 2 6 | 0 0 | 4 0 | 4 3 |
| BARKS— | | | | | |
| Canella alba | per cwt. | 24 0 | 36 0 | 15 6 | 23 0 |
| Cascarilla | per cwt. | 24 0 | 31 0 | 18 0 | 22 0 |
| Peru, crown & grey .. | per lb. | 1 0 | 2 1 | 1 6 | 3 0 |
| Calisaya, flat .. | per lb. | 2 0 | 4 6 | 3 6 | 4 6 |
| quill .. | per lb. | 4 0 | 7 0 | 4 6 | 5 6 |
| Carthagena .. | per lb. | 1 4 | 4 0 | 1 8 | 2 4 |
| Columbian .. | per lb. | 1 0 | 7 0 | 2 0 | 4 6 |
| E. I. | per lb. | 1 6 | 4 6 | 1 2 | 2 8 |
| good & fine .. | per lb. | 5 0 | 10 0 | 3 0 | 7 0 |
| Pitayo | per lb. | 1 6 | 3 3 | 0 6 | 1 6 |
| Red | per lb. | 3 9 | 8 1 | 3 3 | 5 0 |
| Buchu Leaves | per lb. | 0 2 | 1 0 | 0 2½ | 0 3 |
| CAMPHOR, China .. | per cwt. | 78 0 | 80 0 | 80 0 | 0 0 |
| Japan .. | per cwt. | 78 0 | 80 0 | 82 6 | 0 0 |
| Rofin, Eng. per lb. | per lb. | 1 2 | 0 0 | 1 2 | 1 2½ |
| CANTHARIDES | | | | | |
| CHAMOMILE FLOWERS .. | | per cwt. | 0 0 | 4 3 | 2 0 |
| CHAMOMILE | | per lb. | 0 0 | 0 0 | 50 0 |
| CISTOREUM | | per lb. | 0 0 | 0 0 | 9 0 |
| DRAGON'S BLOOD, p. cwt. | | 100 0 | 200 0 | 85 0 | 280 0 |
| FRUITS AND SEEDS (see also Seeds and Spices). | | | | | |
| Anise, China Star .. | per cwt. | 75 0 | 77 6 | 75 0 | 90 0 |
| Spanish, &c. | per cwt. | 35 0 | 42 6 | 45 0 | 50 0 |
| Beans, Tonquin .. | per lb. | 4 0 | 6 0 | 1 9 | 5 0 |
| Cardamoms, Malabar good | per lb. | 6 0 | 8 0 | 4 9 | 5 10 |
| inferior | per lb. | 2 0 | 5 10 | 1 6 | 4 5 |
| Aleppy | per lb. | 2 0 | 6 8 | 2 0 | 5 6 |
| Madras | per lb. | 2 8 | 4 6 | 2 2 | 3 9 |
| Ceylon | per lb. | 2 7 | 4 2 | 3 6 | 4 9 |
| Cassia Fistula | per cwt. | 55 0 | 57 0 | 81 0 | 89 0 |
| Castor Seeds | per cwt. | 0 0 | 0 0 | 0 0 | 0 0 |
| Cocculus Indicus .. | per cwt. | 7 3 | 9 0 | 8 3 | 10 6 |
| Colocynth, apple .. | per lb. | 1 0 | 1 10 | 1 0 | 1 9 |
| Croton Seeds | per cwt. | 28 0 | 0 0 | 26 0 | 27 6 |
| Cubebes | per cwt. | 55 0 | 0 0 | 30 0 | 32 0 |
| Cumin | per cwt. | 36 0 | 50 0 | 20 0 | 35 0 |
| Dividivi | per cwt. | 12 0 | 15 6 | 12 0 | 15 0 |
| Fenugreek | per cwt. | 5 3 | 8 0 | 6 0 | 10 0 |
| Guinea Grains .. | per cwt. | 29 0 | 30 0 | 28 0 | 0 0 |
| Juniper Berries .. | per cwt. | 0 0 | 0 0 | 6 6 | 9 0 |
| Nux Vomica | per cwt. | 7 0 | 10 0 | 9 0 | 14 0 |
| Tamarinds, East India, West India .. | per cwt. | 12 0 | 19 0 | 12 0 | 19 0 |
| Vanilla, large .. | per lb. | 18 0 | 26 0 | 25 6 | 27 6 |
| inferior .. | per lb. | 19 0 | 25 0 | 27 0 | 31 0 |
| GINGER, Preserved, per lb. | per lb. | 8 0 | 18 6 | 15 0 | 26 0 |
| HONEY, Chili | per cwt. | 0 5½ | 0 6 | 0 4½ | 0 7 |
| Jamaica | per cwt. | 30 0 | 36 0 | 45 0 | 52 0 |
| Australian .. | per cwt. | 35 0 | 41 0 | 38 0 | 43 0 |
| IPECACUANHA | per lb. | 0 0 | 0 0 | 0 0 | 0 0 |
| ISINGLASS, Brazil .. | per lb. | 4 2 | 4 7 | 5 3 | 5 6 |
| Tongue sort .. | per lb. | 2 6 | 5 5 | 3 0 | 4 10 |
| East India .. | per lb. | 3 6 | 5 6 | 3 5 | 5 3 |
| West India .. | per lb. | 1 3 | 5 0 | 2 0 | 5 1 |
| Russ, long staple .. | per lb. | 3 7 | 4 7 | 4 0 | 4 4 |
| inferior .. | per lb. | 6 0 | 10 6 | 8 0 | 15 0 |
| Simovia .. | per lb. | 0 0 | 0 0 | 0 0 | 0 0 |
| JALAP, good | per lb. | 1 6 | 2 6 | 1 6 | 3 0 |
| infer. & stems .. | per lb. | 0 11 | 1 1 | 0 8 | 0 10 |
| LEMON JUICE | per degree | 0 9½ | 0 10½ | 0 7 | 0 7½ |
| LIME JUICE | per gall. | 0 0½ | 0 1½ | 0 1½ | 0 1½ |
| LIQUORICE, Spanish .. | per cwt. | 0 3 | 1 8 | 0 0 | 0 0 |
| Liquorice Root .. | per cwt. | 0 0 | 0 0 | 34 0 | 39 0 |
| MANNA, flaky | per lb. | 0 0 | 0 0 | 0 0 | 0 0 |
| small .. | per lb. | 0 0 | 0 0 | 3 6 | 4 0 |
| MUSK, Pod | per oz. | 13 6 | 56 0 | 23 0 | 57 0 |
| Grain | per oz. | 0 0 | 0 0 | 35 0 | 63 0 |
| OILS (see also separate list) | | | | | |
| Almond, expressed .. | per lb. | 2 0 | 0 0 | 1 8 | 0 0 |
| Castor, 1st pale .. | per lb. | 0 4½ | 0 5½ | 0 5 | 0 0 |
| second .. | per lb. | 0 4½ | 0 4½ | 0 4½ | 0 4½ |
| Cod Liver | per gall. | 2 6 | 4 6 | 2 6 | 5 0 |
| Croton | per oz. | 0 2½ | 0 2½ | 0 2½ | 0 2½ |
| Essential Oils: | | | | | |
| Almond | per lb. | 20 0 | 0 0 | 25 0 | 0 0 |
| Anise-seed | per lb. | 7 9 | 0 0 | 6 7 | 6 9 |
| Bay | per cwt. | 0 0 | 0 0 | 65 0 | 70 0 |
| Bergamot | per lb. | 6 0 | 9 0 | 10 0 | 15 0 |
| Cajuput | per bottle | 3 6 | 4 0 | 3 0 | 3 6 |
| Caraway | per lb. | 0 0 | 0 0 | 9 0 | 9 0 |
| Cassia | per lb. | 2 10 | 2 10 | 3 0 | 0 0 |
| Cinnamon | per oz. | 3 9 | 4 3 | 4 6 | 5 6 |
| Cinnamon-leaf .. | per lb. | 0 1½ | 0 0 | 0 2½ | 0 0 |
| Citronelle | per lb. | 0 3 | 0 0 | 0 2½ | 0 0 |
| Clovo | per lb. | 9 0 | 0 0 | 8 0 | 0 0 |
| Ginger Grass .. | per lb. | 0 2½ | 0 3 | 0 2½ | 0 0 |
| Lavender | per lb. | 0 0 | 0 0 | 1 8 | 7 6 |
| Lemon | per lb. | 4 6 | 6 0 | 5 0 | 8 3 |
| Lemongrass | per oz. | 0 2½ | 0 0 | 0 2½ | 0 3 |

| 1879. | | | | 1878. | | | |
|---------------------------------|----------|--------|--------|---------|--------|--|--|
| Essential Oils, continued:— | | | | | | | |
| Neroli | per oz. | 0 0 | to 0 0 | 3 0 | to 6 6 | | |
| Nutmeg | 0 31 | 0 4 | | 0 4½ | 0 5 | | |
| Orange | per lb. | 5 0 | 7 0 | 4 3 | 7 0 | | |
| Otto of Roses | per oz. | 18 0 | 30 0 | 16 0 | 22 0 | | |
| Patchouli | 1 6 | 3 0 | | 1 9 | 3 0 | | |
| Peppermint: | | | | | | | |
| American | per lb. | 8 0 | 12 6 | 10 9 | 12 6 | | |
| English | 21 0 | 23 0 | | 24 0 | 25 0 | | |
| Rosemary | 0 0 | 0 0 | | 2 0 | 2 6 | | |
| Sassafras | 2 0 | 2 3 | | 2 3 | 2 6 | | |
| Spearmint | 8 0 | 9 0 | | 12 0 | 15 0 | | |
| Thyme | 0 0 | 0 0 | | 0 0 | 0 0 | | |
| Mace, expressed | per oz. | 0 6 | 0 7 | 0 6 | 0 10 | | |
| Opium, Turkey | per lb. | 17 0 | 19 0 | 17 0 | 17 6 | | |
| inferior | 13 0 | 14 6 | | 10 0 | 12 0 | | |
| QUASSIA (bitter wood) | per ton | 100 0 | 130 0 | 100 0 | 130 0 | | |
| RHUBARB, China, good and | | | | | | | |
| fine | per lb. | 1 9 | 3 6 | 1 9 | 3 6 | | |
| Mid. to ord. | 0 9 | 1 6 | | 0 9 | 1 6 | | |
| Dutch Trimmed | 0 0 | 0 0 | | 0 0 | 0 0 | | |
| ROOTS—Calumba | per cwt. | 30 0 | 50 0 | 25 0 | 38 0 | | |
| China | 20 0 | 27 0 | | 30 0 | 32 0 | | |
| Chiretta | per lb. | 0 2½ | 0 3½ | 0 3 | 0 4 | | |
| Galangal | per cwt. | 22 0 | 23 6 | 22 0 | 23 0 | | |
| Gentian | 0 0 | 0 0 | | 19 0 | 21 0 | | |
| Hellebore | 0 0 | 0 0 | | 0 0 | 0 0 | | |
| Orris | 20 0 | 45 0 | | 55 0 | 65 0 | | |
| Pellitory | 0 0 | 0 0 | | 70 0 | 76 0 | | |
| Pink | per lb. | 0 0 | 0 0 | 0 0 | 0 0 | | |
| Rhatany | 0 2 | 0 5 | | 0 4 | 0 8 | | |
| Seneka | 2 6 | 2 8 | | 3 6 | 3 9 | | |
| Snake | 0 0 | 0 0 | | 0 10 | 1 0 | | |
| SAFFRON, Spanish | per cwt. | 30 0 | 50 0 | 20 0 | 32 0 | | |
| SALEP | 120 0 | 150 0 | | 240 0 | 300 0 | | |
| SARSAPARILLA, Lima | per lb. | 0 4 | 0 5½ | 0 0 | 0 0 | | |
| Guayaquil | 1 1 | 1 4 | | 2 2 | 2 6 | | |
| Honduras | 1 0 | 1 4 | | 0 11 | 1 6 | | |
| Jamaica | 1 2 | 1 7 | | 1 2 | 2 6 | | |
| SASSAFRAS | per cwt. | 0 0 | 0 0 | 9 0 | 11 0 | | |
| SCAMMONY, Virgin | per lb. | 0 0 | 0 0 | 0 0 | 0 0 | | |
| second & ordinary | 0 0 | 0 0 | | 0 0 | 0 0 | | |
| SENA, Bombay | 0 0½ | 0 2½ | | 0 1 | 1 6 | | |
| Tinnivelly | 0 1½ | 1 3 | | 0 1 | 1 6 | | |
| Alexandria | 0 4 | 1 6 | | 0 5 | 2 0 | | |
| SPERMACETI, refined | 1 4 | 0 0 | | 1 4 | 0 0 | | |
| American | 1 1 | 0 0 | | 1 2 | 0 0 | | |
| SQUILLS | 0 0 | 0 3 | | 0 2½ | 0 4 | | |
| GUMS. | | | | | | | |
| AMMONIAC drop | per cwt. | £ 2 0 | £ 2 2 | £ 1 18 | £ 2 0 | | |
| lump | 0 15 | 1 18 | | 0 15 | 1 15 | | |
| ANIMI, fine washed | 13 15 | 15 0 | | 13 0 | 14 10 | | |
| bold scraped | 12 0 | 13 10 | | 10 10 | 12 10 | | |
| sorts | 9 2½ | 11 17½ | | 6 0 | 9 10 | | |
| dark | 5 0 | 8 10 | | 5 0 | 6 0 | | |
| ARABIC, E.L., fine | | | | | | | |
| pale picked | 2 15 | 3 5 | | 2 18 | 3 14 | | |
| sorts, md. to fin. | 2 2 | 2 14 | | 2 5 | 2 17 | | |
| garblings | 1 2 | 2 0 | | 1 15 | 2 0 | | |
| TURKEY, pick. g.d. to fin. | 3 16 | 8 10 | | 6 0 | 9 10 | | |
| second & inf. | 3 5 | 5 0 | | 3 0 | 5 15 | | |
| in sorts | 2 5 | 2 10 | | 2 10 | 3 16 | | |
| Gedda | 1 10½ | 1 14 | | 1 14 | 1 19 | | |
| BARBARY, brown | 2 16 | 3 0 | | 2 7 | 2 12 | | |
| AUSTRALIAN | 1 15 | 2 10 | | 1 19 | 2 12 | | |
| ASSAFETIDA, cm. to fin. | 1 8 | 3 0 | | 0 15 | 2 0 | | |
| BENJAMIN, 1st & 2nd | 21 0 | 70 0 | | 45 0 | 80 0 | | |
| Sumatra 1st & 2nd | 6 5 | 14 12½ | | 5 17½ | 14 0 | | |
| 3rd | 2 10 | 5 12½ | | 2 4 | 5 10 | | |
| COPAL, Angola red | 0 0 | 0 0 | | 6 0 | 6 15 | | |
| Benguela | 0 0 | 0 0 | | 4 0 | 5 0 | | |
| Sierra Leone, per lb. | 0 7½ | 0 10 | | 0 6½ | 0 9 | | |
| Manilla | per cwt. | 16 0 | 25 0 | 18 0 | 27 0 | | |
| DAMMAR, pale | 72 0 | 72 6 | | 75 0 | 80 0 | | |
| Singapore | 55 0 | 65 0 | | 72 0 | 78 0 | | |
| EUPHORBIA | 0 0 | 0 0 | | 9 0 | 15 0 | | |
| GALBANUM | per lb. | 0 0 | 0 0 | 0 9 | 1 3 | | |
| GAMBOGE, pick. pipe | per cwt. | 200 0 | 250 0 | 190 0 | 290 0 | | |
| GUAIACUM | per lb. | 0 6 | 1 6 | 1 8 | 2 5 | | |
| KNO | per cwt. | 65 0 | 90 0 | 81 0 | 83 0 | | |
| KOWRIE, sorts | 20 0 | 45 0 | | 20 0 | 43 0 | | |
| selected | 122 6 | 172 6 | | 110 0 | 170 0 | | |
| MASTIC, picked | per lb. | 3 0 | 3 6 | 4 0 | 5 0 | | |
| MYRRH, g.d. & fine | per cwt. | 150 0 | 170 0 | 152 6 | 240 0 | | |
| ord. to fair | 65 0 | 142 6 | | 80 0 | 130 0 | | |
| OLIBANUM, p. drop | 59 0 | 66 0 | | 49 0 | 48 0 | | |
| amber & ylw. | 40 0 | 53 0 | | 31 0 | 43 0 | | |
| garblings | 15 0 | 35 0 | | 18 0 | 29 0 | | |
| SENEGAL | 60 0 | 0 0 | | 60 0 | 65 0 | | |
| SANDARAC | 60 0 | 110 0 | | 82 0 | 100 0 | | |
| SHELLAC, Orange | 73 0 | 87 0 | | 70 0 | 85 0 | | |
| Liver | 67 0 | 73 0 | | 68 0 | 74 0 | | |
| THUS | 0 0 | 0 0 | | 20 0 | 21 6 | | |
| TRAGACANTH, leaf | 220 0 | 410 0 | | 240 0 | 400 0 | | |
| in sorts | 65 0 | 180 0 | | 25 0 | 175 0 | | |
| OILS. | | | | | | | |
| SEAL, pale | per tun | £ 28 0 | £ 0 0 | £ 33 10 | £ 0 0 | | |
| yellow to tinged | 25 0 | 27 0 | | 30 10 | 33 0 | | |
| brown | 24 0 | 0 0 | | 29 0 | 30 0 | | |
| SPERM | 58 0 | 0 0 | | 75 0 | 0 0 | | |
| BODY | 0 0 | 0 0 | | 0 0 | 0 0 | | |
| JO | 28 0 | 0 0 | | 32 10 | 0 0 | | |

| | | 1879. | | 1878. | |
|---------------------------------|-----------|-------|----------|-------|----------|
| Oils, continued:— | | £ | s. | £ | s. |
| WHALE, South Sea, pale, per tun | 27 0 | to | 0 0 | 33 0 | to 0 0 |
| yellow .. | 26 0 | .. | 0 0 | 32 0 | .. 0 0 |
| brown .. | 23 0 | .. | 21 0 | 29 0 | .. 30 0 |
| East India, Fish .. | 0 0 | .. | 0 0 | 25 10 | .. 0 0 |
| OLIVE, Galipoli ... per ton | 0 0 | .. | 0 0 | 0 0 | .. 0 0 |
| Gioja | 0 0 | .. | 0 0 | 0 0 | .. 0 0 |
| Levant | 43 0 | .. | 41 0 | 49 0 | .. 0 0 |
| Mogador | 0 0 | .. | 0 0 | 48 0 | .. 0 0 |
| Spanish | 46 0 | .. | 0 0 | 49 10 | .. 50 0 |
| Sicily | 0 0 | .. | 0 0 | 49 10 | .. 0 0 |
| COCOANUT, Coch.. | 44 0 | .. | 45 0 | 46 0 | .. 0 0 |
| Ceylon | 38 0 | .. | 0 0 | 38 15 | .. 39 0 |
| Mauritius .. | 39 0 | .. | 0 0 | 39 10 | .. 41 0 |
| GROUND NUT AND GINGELLY : | | | | | |
| Bombay | 0 0 | .. | 0 0 | 0 0 | .. 0 0 |
| Madras | 0 0 | .. | 0 0 | 0 0 | .. 0 0 |
| PALM, fine | 35 10 | .. | 0 0 | 40 0 | .. 40 10 |
| LINSEED | 24 12½ | .. | 0 0 | 26 0 | .. 26 5 |
| RAPESEED, English, pale .. | 32 0 | .. | 0 0 | 38 0 | .. 0 0 |
| brown | 30 0 | .. | 0 0 | 36 0 | .. 0 0 |
| Foreign, pale .. | 0 0 | .. | 0 0 | 41 10 | .. 41 0 |
| brown | 0 0 | .. | 0 0 | 0 0 | .. 0 0 |
| COTTONSEED | 28 0 | .. | 0 0 | 31 0 | .. 0 0 |
| LARD | 40 0 | .. | 42 0 | 49 0 | .. 50 0 |
| TALLOW | 39 0 | .. | 35 0 | 39 0 | .. 54 0 |
| | | £ | d. | £ | d. |
| TURPENTINE, American, eks. | 22 3 | .. | 0 0 | 25 3 | .. 25 6 |
| French .. | 0 0 | .. | 0 0 | 0 0 | .. 0 0 |
| PETROLEUM, Crude | 0 0 | .. | 0 0 | 0 0 | .. 0 0 |
| refined, per gall. | 0 7½ | .. | 0 7½ | 0 9½ | .. 0 0 |
| Spirit | 0 11 | .. | 1 1 | 0 7½ | .. 0 9 |
| SEEDS. | | | | | |
| CANARY | per qr. | 46 0 | .. 50 0 | 44 0 | .. 51 6 |
| CARAWAY, English per cwt. | 0 0 | .. | 0 0 | 43 0 | .. 45 0 |
| German, &c. | 0 0 | .. | 0 0 | 48 0 | .. 49 0 |
| CORIANDE | 15 0 | .. | 20 0 | 18 0 | .. 23 0 |
| HEMP | per qr. | 39 0 | .. 44 0 | 0 0 | .. 0 0 |
| LINSEED | English | 60 0 | .. 68 0 | 0 0 | .. 0 0 |
| Black Sea & Azof .. | 47 6 | .. | 48 0 | 0 0 | .. 0 0 |
| Calcutta | 47 6 | .. | 47 9 | 50 6 | .. 0 0 |
| Bombay | 49 0 | .. | 0 0 | 51 0 | .. 0 0 |
| St. Petersbrg., .. | 48 0 | .. | 0 0 | 50 0 | .. 51 0 |
| Mustard, brown, per bshl. | 0 0 | .. | 0 0 | 0 0 | .. 0 0 |
| white | 9 0 | .. | 12 6 | 13 0 | .. 16 0 |
| POPPY, East India, per qr. | 50 0 | .. | 50 6 | 49 0 | .. 0 0 |
| SPICES. | | | | | |
| CASSIA LIGNEA | per cwt. | 39 0 | .. 50 0 | 43 0 | .. 60 0 |
| Vera | 22 0 | .. | 36 0 | 22 0 | .. 45 0 |
| Buds | 53 0 | .. | 54 0 | 70 0 | .. 73 0 |
| CINNAMON, Ceylon : | | | | | |
| 1st quality | per lb. | 1 4 | .. 3 3 | 2 2 | .. 3 6 |
| 2nd do. | 1 2 | .. | 2 4 | 2 0 | .. 2 9½ |
| 3rd do. | 1 1 | .. | 1 8 | 1 9 | .. 2 3 |
| Tellicherry | 1 6 | .. | 2 4 | 2 4 | .. 2 7 |
| Caiips | 0 2½ | .. | 0 5 | 0 3½ | .. 0 6½ |
| CLOVES, Penang | 1 8 | .. | 1 9 | 1 11 | .. 2 2 |
| Amboyna | 1 4 | .. | 1 6 | 1 4 | .. 1 7 |
| Zanzibar | 1 4 | .. | 1 4½ | 1 2 | .. 1 3 |
| GINGER, Jam., fine per cwt. | 90 0 | .. | 200 0 | 91 0 | .. 202 6 |
| Ord. to good | 52 0 | .. | 80 0 | 53 0 | .. 90 0 |
| African | 21 0 | .. | 22 0 | 24 0 | .. 0 0 |
| Bengal | 16 6 | .. | 0 0 | 21 6 | .. 22 6 |
| Malabar | 0 0 | .. | 0 0 | 26 0 | .. 28 0 |
| Cochin | 46 0 | .. | 125 0 | 50 0 | .. 115 0 |
| PEPPER, Blk., Malabar, per lb. | 0 3½ | .. | 0 4½ | 0 4½ | .. 0 5½ |
| Singapore | 0 3½ | .. | 0 3½ | 0 3½ | .. 0 3½ |
| White Tellicherry .. | 0 0 | .. | 0 0 | 0 10 | .. 1 4 |
| Cayenne | 1 4 | .. | 3 1 | 1 4 | .. 3 0 |
| MOSE, 1st quality .. | 1 8 | .. | 2 6 | 2 2 | .. 3 3 |
| 2nd and inferior .. | 0 11 | .. | 1 7 | 1 0 | .. 2 1 |
| NUTMEGS, 78 to 60 to lb. | 3 5 | .. | 5 0 | 3 11 | .. 5 0 |
| 90 to 80 | 2 11 | .. | 3 4 | 3 2 | .. 3 10 |
| 132 to 95 | 1 11 | .. | 2 10 | 2 0 | .. 3 1 |
| PIMENTA | 0 4½ | .. | 0 5 | 0 4½ | .. 0 4½ |
| VARIOUS PRODUCTS. | | | | | |
| COCHINEAL— | | | | | |
| Honduras, black .. | per lb. | 2 0 | .. 2 5 | 2 2 | .. 2 6 |
| " silver .. | 2 0 | .. | 2 3 | 1 11 | .. 2 1 |
| " pasty .. | 0 0 | .. | 0 0 | 1 10 | .. 0 0 |
| Mexican, black | 2 1 | .. | 2 2 | 2 0 | .. 2 1 |
| " silver | 2 1 | .. | 0 0 | 1 11 | .. 2 0 |
| Teneriffe, black .. | 2 1 | .. | 2 11 | 2 3 | .. 2 10 |
| " silver | 2 1 | .. | 2 2 | 1 11 | .. 2 1 |
| SOAP, Castile | per cwt. | 26 0 | .. 33 0 | 33 0 | .. 34 10 |
| SOY, China | per gall. | 1 11 | .. 2 0 | 2 6 | .. 0 0 |
| TERRA JAPONICA— | | | | | |
| Gambier | per cwt. | 17 6 | .. 17 9 | 17 0 | .. 30 6 |
| Free cubes | 24 0 | .. | 27 0 | 27 0 | .. 23 0 |
| Cutch | 21 0 | .. | 24 0 | 23 0 | .. 26 0 |
| WAX, BEES, English .. | £) 0 | .. | £) 0 | £) 0 | .. 0 0 |
| Jamaica | 7 0 | .. | 7 10 | 7 0 | .. 7 15 |
| East India | 6 0 | .. | 6 10 | 0 0 | .. 0 0 |
| VEGETABLE, Japan .. | 2 16 | .. | 2 19 | 2 9 | .. 2 10 |
| WOOD, DYE, Bar | per ton | 3 10 | .. 3 12½ | 3 5 | .. 3 10 |
| Brazil | 0 0 | .. | 0 0 | 14 0 | .. 20 0 |
| Cam | 18 0 | .. | 23 0 | 22 0 | .. 33 0 |
| Fustic, Cuba | 0 0 | .. | 0 0 | 8 0 | .. 8 10 |
| Jamaica | 6 15 | .. | 7 10 | 5 0 | .. 5 10 |
| Logwood, Campeachy, .. | 8 5 | .. | 8 10 | 8 5 | .. 8 15 |
| Honduras | 6 10 | .. | 7 0 | 6 10 | .. 6 15 |
| St. Domingo | 5 15 | .. | 6 5 | 5 10 | .. 6 0 |
| Jamaica | 5 5 | .. | 5 15 | 5 5 | .. 5 15 |
| LIMA, first pile | 10 0 | .. | 11 0 | 9 10 | .. 10 0 |
| RED SANDERS | 6 10 | .. | 7 0 | 6 0 | .. 6 5 |



Can Any Registered Dentist Assume the Title of Dental Surgeon?—At a recent meeting of the Dental Reform Committee, the body which framed the Dentists Act of 1878, a discussion occurred on a question which was mooted in this section last month. Mr. Dennant asked if a chemist registered under the Act would be entitled to call himself a dental-surgeon or a surgeon-dentist. The President (Mr. John Tomes) said it was a question for a lawyer; to his mind, such an assumption of a title was certainly a moral offence. A general discussion ensued, and the general opinion expressed was that, as the Act permits the registration of any person who at its passing was *bona fide* engaged in the practice of dentistry or dental-surgery, in conjunction with the practice of pharmacy, it could not be assumed that a person duly registered with such a qualification would not have a legal right to the title of "dental-surgeon." A few thought that the title "dental-surgeon" belonged truly only to those who held the L.D.S. qualification of the College of Surgeons. It was pointed out, too, that the Medical Council would have the right of cancelling the registration of any person who had obtained registration by false representations, or who had been convicted of unauthorised assumption of a title. But, as for this purpose legal conviction would be necessary, the point did not seem very *apropos*. It was resolved, however, that counsel's opinion should be taken, the question to be submitted being left to Mr. Tomes. The discussion is reported in the *British Journal of Dental Science* for January.

11/23. *9. H.—Eucalyptus Oil.*—All the eucalyptus oil in commerce is obtained from the *Eucalyptus amygdalina*. It seems probable that scientific writers on the subject are not aware of this fact, for they almost invariably allude to the oil as that of the *Eucalyptus globulus*. The latter is, of course, to be had, but its aroma is less agreeable than that of the *E. amygdalina*, the leaves yield a far less proportion of oil, not more than 6 ounces being obtained from a hundredweight, and the tree, though indigenous to Victoria, grows only in districts very difficult of access, such as the Cape Otway Range. The oil of the *E. amygdalina* is to be bought in England in bulk at about 2s. 6d. per lb. Mr. Bosisto, of Melbourne, reckons that the oil of the *E. globulus* could not be sold here for less than 12s. Eucalyptol is an ethereal spirit obtained from the oil of the *E. globulus*, and it could not be sold in England for less than 48s. per lb.

17/269. *K. D.—Cleaning Stains on India-rubber Beds.*—The difficulty is that if these stains are taken out by soda or any alkali, a mark will be left which cannot be removed. The only safe plan is to rub first with a sponge and cold water, and afterwards to use a little soap with a soft tooth-brush. This must be applied for a long time with patient brushing. Perhaps a little fine pumice-stone might aid the process.

19/264. *Guillemus.*—The maker of a proprietary article may reckon to get about half the retail price net if he supply it in the usual course of trade. The wholesale houses pay monthly or quarterly, according to arrangement.

9/52. **Gums Senegal and Arabic, in Confectionery.**—*Regular Subscriber.*—What is the difference in working of gums, E.I. Arabic and Senegal? Is Senegal more soluble, and does it get so hard as the E.I. Arabic when used in the form of jujube by confectioners, and is Senegal of equal strength?—Senegal is not of equal strength with Arabic. It dissolves differently, and when made up does not get so hard, but remains pasty. It is, therefore, not so useful in confectionery.

11/13. *G. L. N.—Unfermented Wine.*—Can any liquid be correctly called wine, unless it is a product of fermentation?—The term is, we should say, both etymologically and scientifically inaccurate. The Greek word *oinos*, from which our "wine" is derived, is believed to have had a Semitic origin, and to be associated with the Hebrew *vin*, which is a derivative of the verb *vain*, which meant to effervesce (Littre). If there could be an "unfermented wine" it would, we presume, be merely a syrup.

11/49. *Guimaue.*—The adhesive substance used on the label you send us is evidently a solution of glue or gelatine.

11/57. **Starch-making.**—*Queenstand.*—We know of no work in English treating specially of the manufacture of starch. Twenty pages are devoted to the subject in Paul's "Payen's Industrial Chemistry," published by Longmans & Co. at about 18s. Hartleben, of Vienna, Pesth, and Leipzig, has published "Die Stärke-Fabrikation und die Fabrikation des Tranben-zuckers" (the manufacture of starch and grape sugar). A popular account of the manufacture of all kinds of starch found in the market, as potato, wheat, maize, rice, arrowroot, and other starches, washing and toilet starch, ordinary sago, also the utilisation in the preparation of starch of all suitable waste products, by Felix Rehwald, starch and grape sugar maker, with 16 explanatory engravings, price (in Vienna) 3s. If you can read German you will probably find this work as cheap and convenient as any you can get. We do not think you will find in any book a minute description of the details of starch manufacture. These secrets are not interesting to the general public, and are too valuable to be given to the world. They are only to be learnt by experience.

11/39. **Pharmacy in New Zealand.**—*Obedientia.*—The latest advices inform us that a Pharmaceutical Society is now being organised in New Zealand, if it is not already in existence. We do not yet know its constitution or laws, but it is nearly certain that, for assistants at least, the examinations will not be compulsory. There is a fair demand for assistants; vacancies are constantly occurring, and they are fairly well paid. As regards the 30l. which you propose to invest in something to trade with over there, we strongly advise you to limit yourself to carrying cash. You would find 30l. worth of merchandise as much trouble as 3,000l. worth, and you would most likely make a loss on it. Articles in demand there are already supplied by existing agencies.

Wallace asks the editor of the *English Mechanic* whether "a superficial knowledge of Latin will carry a chemist's assistant through an examination of chemistry?"—We do not hold so light an opinion of Latin as Mr. Lowe professes to entertain, but we cannot attribute to it any of the magical powers which "Wallace" seems to fancy may reside in a superficial acquaintance with it.

13/51. **Pill-coating—Labels on Tin.**—*H. Hobson.*—Both your inquiries have been fully answered in THE CHEMIST AND DRUGGIST for the past year. Two lengthy papers on pill-coating will be found on pages 12 and 205 of our last volume, and several devices for securing paper labels to tin are given on page 188 of the "Diary" for 1879.

14/11. **Silver (1).**—The last evening meeting of the Pharmaceutical Society was held on Wednesday, February 5. The next will be held on the first Wednesday in March. The next annual meeting will be held about the middle of May.

Compound Liquorice Powder.—The compound powder of liquorice or Pulvis glycyrrhizae compositus of the addendum to the Pharmacopoeia is thus composed. Senna and liquorice root of each 2 oz., refined sugar 6 oz., all in fine powder; mix and sift. The Pulvis liquoritice compositus, or Brust pulver of the Pharmacopoeia Germanica (synonyms, Pulvis glycyrrhizae compositus, pulvis pectoralis Knelle, and pectoral powder) is made by adding an ounce each of fennel fruit and washed sulphur to the above mixture.

Mildewed Plate Glass.—Can any of our readers throw light on the following case.—Some three months ago I got plate glass (silvered) put back of my shop bottles some three inches from the wall, say two-thirds on the shelf, the wall being an inside wall. The glass has become quite mildewed, covered all over with spots; in fact, the silver can be rubbed off, although it is the patent plate—that is, painted with red paint, or something of the sort. What is the reason of it. My shop is perfectly dry—gas burning both sides of the wall.

13/32. *Ignoramus.*—Your best plan will be to get a Materia Medica cabinet (these are often advertised in our Exchange Column), and some book on Materia Medica, and study them together, until you are familiar with the names and history of every drug. If you wish to learn only just so much as is necessary, a book such as Minter's or Wills' will suit you. If you mean to take an interest in the subject, we should advise you to get a copy of Hanbury's "Pharmacographia," and not to spare your atlas. Hanbury carefully studied will give you a good deal of information on the commercial history of drugs. When you know the drugs, the chemicals must engage your attention; but the knowledge of a chemist's assistant cannot be acquired without a "vast deal of trouble," and you can never expect to know the "ins and outs" without an apprenticeship.

14/51. **Ink for Spring Stamping Presses.**—*C. W. W. Nottingham.*—The following have been tried and found useful. They answer best when applied evenly, by means of a small pad, to a little cushion on which the stamps are to be inked.

Black (1). Finest lamp black, 1 part; Prussian blue, 2 parts; rub with a little glycerine, add pulvis acacie 1 part, and enough glycerine to make a thin paste. (2). Another form for black ink is the following:—Finest lamp black, 10 parts; pulvis acacie, 4 parts; glycerine, 4 parts; water, 3 parts. Dissolve the gum in the water, add the glycerine, then rub the lamp black with the mixture in a mortar.

Blue. Rub to a smooth paste Prussian blue 6 parts, with oxalic acid 1 part, and a little water. Leave in a warm place for 24 hours, then add more water and gum arabic 1 part, and water to make a thin paste.

Aniline Inks may be made by using the proportions of glycerine and gum arabic used for black ink (1) adding the aniline colour in any desired quantity.

Coloured inks make as black (2) substituting appropriate pigments for lamp black; viz. for yellow, chrome yellow; red, red lead or red ochre; green, green ultramarine or chrome green; blue, indigo, Prussian blue, or blue ultramarine; brown, umber. Of course, every different stamp will require ink specially adapted to it. The above formulæ answer well under the conditions given, but we cannot answer for their behaviour under other circumstances. If they do not suit you please repeat your query.

12/38. **Surgeons' Preliminary Examination.**—A syllabus can be obtained on application to the Secretary to the Royal College of Surgeons, Lincoln's Inn Fields.

Practice of Pharmacy in Australia and New Zealand.—Mr. H. F. Smyth, Bell Street, Reigate, will be glad of any information he can obtain on this subject.

ZINCI OXYD. PUR.

(HARRIS'S),

GUARANTEED TO ANSWER ALL THE B.P. TESTS,

In 4, 7, 14 & 28lb. Boxes, Boxes Free. Also in 1lb. & 2lb. Parcels, 1s. 1b.

SPECIAL QUOTATIONS TO LARGE BUYERS.

PLEASE NOTE—EVERY PACKAGE HAS OUR LABEL AND SEAL UPON IT.

KEPT IN STOCK BY THE FOLLOWING WHOLESALE DRUGGISTS:—

Messrs. Evans, Lescher & Evans, London.
,, Tidman & SonMessrs. Evans, Sons & Co., Liverpool.
,, Boileau & Boyd, Dublin.Messrs. Duncan, Flockhart & Co., Edinburgh
,, Woolley, Sons & Co., Manchester.**PHILIP HARRIS & CO.,****MANUFACTURING WHOLESALE & EXPORT CHEMISTS, BIRMINGHAM.**

We ask reference to the announcement of MESSRS. W. R. WARNER & Co., on p. 66. Detailed Price Lists of the Formulæ in stock are now ready, and will be supplied on application. The advantages claimed for WARNER'S PILLS are that they are uniformly and carefully prepared, thoroughly soluble, and in every way satisfactory.

Warner's SUGAR COATED PILLS.

British Agents—F. NEWBERY & SONS, 37 Newgate Street, E.C.

Lavender Water.The attention of the Trade is asked to **BERDOE'S LAVENDER WATER**, of Triple Strength.

This article has proved itself worthy of appreciation, and is really well prepared and in good condition. Price per Large Bottle,

4s. 9d.; half ditto, 2s. 5d.

(Bottles contain about, or more than, twenty fluid ounces.)



Proprietors—F. NEWBERY & SONS, 37 Newgate Street, London.

PULVERMACHER'S**PATENT GALVANIC CHAIN-BANDS, BELTS, AND BATTERIES**

(RECENTLY IMPROVED)

Approved by the Academy of Medicine of Paris, and other Medical Authorities in England and Abroad.

VITAL ENERGY, it is well known, depends upon the normal functions of the nervo-electric fluid governing the whole economy; any deficiency thereof in the system manifests itself, according to the locality, by variety of troublesome ailments, such as

Indigestion
Liver Complaints
Neuralgia
Sciatica
Deafness
Writer's Cramp
Loss of Voice

Asthma
Bronchitis
Paralysis
Epilepsy
Rheumatism
Gout
Constipation

Local Debility
General Debility
Female Complaints
Mental and
Physical Weakness
Functional Disorders
&c., &c.

This is no conjecture, but an established scientific fact, and it must be admitted that **PULVERMACHER'S GALVANIC CHAIN-BANDS**, by applying this electrical deficiency, constitutes Nature's most congenial curative in the ailments referred to, embodying a host of remedies in one.

Thirty years' successful experience has proved the marvellous remedial powers of these appliances, even in cases defying ordinary treatment.

PRICE**GALVANO-PILINE CHAIN-BANDS.**

NARROW CHAIN-BANDS for Sciatica, Rheumatic, Neuralgia, and Gouty Pains, Chronic Rheumatism, Local Paralysis, and Cramp in the Extremities, according to Electric Power.

5s., 10s. 6d., 15s., 18s., 22s., and 40s.

BROAD CHAIN-BANDS or BELTS for Lumbago, Indigestion, Liver, Chest, and Nervous Complaints, &c., wearable as a Belt.

22s., 30s., 40s., and 50s.

BROAD CHAIN-BANDS for Nervous Deafness, Head, Tooth, and Face Aches, and Noises in the Head

21s. and upwards.

BROAD CHAINS for Loss of Voice and other Affections of the Throat, Asthma, and Spinal Complaints

10s. 6d., 18s., 22s., and 40s.

BROAD CHAIN-BANDS for Writers' Cramp, Trembling, Nervousness, &c.

22s. and 40s.

securing a Warm and Comfortable Application, free from possible counter-irritation, any of the above Band can be Felted, if required, at an extra cost of from 1s. upwards.

PAMPHLET POST FREE ON APPLICATION.

L. PULVERMACHER, 194 Regent St., London, W.

A most Liberal Reduction allowed to the Medical Profession, Chemists and Druggists, and Hospitals.

THE CONTINUOUS VOLTA-ELECTRIC CURRENTS, rendered most conveniently self-applicable by recent improvements of these Chain-Bands, although applied externally, penetrate to the innermost organs, promoting digestion, circulation, and nutrition, and perform their recuperative and restorative work in a silent, natural way, devoid of the costliness, uncertainty and inconvenience of ordinary treatment, or of any unpleasant sensation or shocks, counter-irritation, &c.

Even a Five Shilling Band of the minimum electric power evinces its genuineness by deflecting a telegraphic needle at many miles' distance, whilst those of superior price and power produce all the physical, chemical, and physiological phenomena possessing the famous curative powers of the voltaic battery, enhanced by their great portability.

Mr. **PULVERMACHER** refrains from advancing statements of his own in favour of his Medico Galvaic Appliances, but confines himself mainly to quotations from the opinions of competent medical and scientific authorities, including Sir C. Locock, Bart., M.D., F.R.C.S.; Sir HENRY HOLLAND, Bart., M.D., F.R.C.S., and F.R.S.; Sir J. R. MARTIN, Bart., C.B., F.R.C.S., F.S.A., and F.R.S.; Sir W. FERGUSSON, Bart., M.D. F.R.S., F.R.C.S., &c., reproduced in Pamphlet, post free.

LIST.

F. COMBINED BANDS for General Debility, Central Paralysis, Epilepsy, and Functional Disorders

40s., 50s., and 60s.

COMPLETE SET, WITH BELT AND VOLTA-ELECTRIC BATTERY.

£5, £8, and £10 10s.

CHAIN BATTERIES.

G. CHAIN BATTERIES for Extreme Nervous Debility, Paralysis, and for Restoring Exhausted Vital Energy (to be used in conjunction with specially combined Bands)

£3 10s. to 5 guineas.

H. INTENSITY BATTERIES for Treatment by Electric Baths in the Patient's own Bedroom in various cases, for Paralysis, Want of Power, &c., and for eliminating poisonous substances from the system (lead and mercury), 120 elements

£6 6s.

securing a Warm and Comfortable Application, free from possible counter-irritation, any of the above Band can be Felted, if required, at an extra cost of from 1s. upwards.

F. NEWBERY & SONS.

37 Newgate Street,
LONDON, E.C.

CATALOGUE.

Of British and Foreign Proprietary Medicines, Druggists' and General Sundries, &c., 168 pp., 4to., sent free on application.

"ACME" FEEDERS.

White Crystal Glass Bottle, Tube and Bottle Brushes, &c., in neat box, at per dozen, 7s. The same, with pure Native Rubber Fittings, &c., &c., at 10s. 6d. per dozen, subject to usual discount.

MUSTARD PLASTERS.

Equal, if not superior, to any in the market, and affording a *reasonable profit* to dealers. 6d. Damp-proof Cases at 3s. per dozen; 1s. 3d. Tins, at 10s. 6d. per dozen.

BERDOE'S PERFUMES.

Triple strength for reducing. Bottles contain 5 ozs., 10 ozs., or 20 ozs. Upwards of 50 varieties, from 9s. 6d. per 20 ozs. Bottles not charged for. *Details in CHEMIST AND DRUGGIST for August. See also Trade Notices, page 201.*

BROCKEDON'S POTASS.

Brockedon's Compressed Pure Bi-carbonates of Soda or Potass are the well-known remedies for Indigestion, Flatulency, &c. Handsome Show Boxes, containing 1 dozen 1s. or $\frac{1}{2}$ dozen 2s. 6d. size, are now ready. No extra charge if packed in bottles for exportation.

SIXPENNY FEEDERS.

Several varieties and prices. Green Glass and Boxwood Mounted Corks, 3s. 6d. per dozen; ditto, with Terra Cotta Caps, at 3s. 9d. per dozen; White Glass Bottle and White Porcelain Caps, at 4s. per dozen; "Duplex" Bent Feeders, at 3s. 9d. and 4s. per dozen.

COTTON WOOL.

Attention is called to the new and thoroughly *Absorbent Cotton Wool*, which possesses special advantages for dentists' use and as a wound dressing. It is perfectly pure and white, and should supersede the use of the sponge in dressings. Price per lb., 2s. 6d.

SANTAL CAPSULES.

Churchill's Pure Santal Oil Capsules are offered to the Trade as a most satisfactory and reliable Medicine. In boxes containing 24 Capsules, at per dozen, 27s.

WARNER'S PILLS.

F. Newbery & Sons are the sole appointed agents for the Sugar-coated Pills of W. R. Warner & Co. These Pills were awarded World's Fair Prizes at Philadelphia, 1876, Vienna 1873, Chili 1875, and Sydney 1877, and are gaining the appreciation of the Profession and the Trade generally in the country. See Advt., page 201.

PARIS EXPOSITION, 1878.

AWARDED BRONZE MEDAL.

FIVE GRAND WORLD'S FAIR PRIZES.

*Orders received from all parts of the
World.*

VIENNA, 1873.
CHILI, 1875.
CENTENNIAL, 1876.
SYDNEY, 1877.
PARIS, 1878.



WM. R. WARNER & CO.'S

PERMANENT] Sugar-Coated Pills, [AND SOLUBLE.

OF THE BRITISH PHARMACOPŒIA AND RECIPES OF EMINENT PHYSICIANS.

CENTENNIAL WORLD'S FAIR AWARD.

"The Sugar-Coated Pills of Wm. R. Warner & Co. are SOLUBLE, RELIABLE, and UNSURPASSED in the perfection of SUGAR-COATING, thorough composition, and accurate subdivision.

"The pills of PHOSPHORUS are worthy of special notice. The element is thoroughly diffused and subdivided, yet perfectly protected from oxidation."

A. T. GOSHORN, *Director General.*
J. R. HAWLEY, *President.*

[SEAL] Attest, J. L. CAMPBELL.

| Price per 100. per 500. | | | Price per 100. per 500. | | | Price per 100. per 500. | | |
|--|-------|-----|-------------------------|---|-------|---|-------|------|
| No. | s. d. | No. | s. d. | No. | s. d. | No. | s. d. | No. |
| 25. Pil. Aloes et Assaf. B.P. .. | 1 0 | 43 | 4 3 | 46. Pil. Acid. Arsenious .. | 1 0 | 67. Pil. Rhei. Comp. .. | 2 0 | 9 3 |
| 26. " Aloes Barbado. B.P. .. | 1 0 | 44 | 4 3 | 47. " Ague .. | 2 3 | 68. " Strychnia, $\frac{1}{10}$ gr. .. | 1 0 | 4 3 |
| 27. " Aloes et Ferri. B.P. .. | 1 0 | 45 | 4 3 | 48. " Aloes et Mastich .. | 1 6 | 69. " Iodoform et Ferri .. | 6 0 | — |
| 28. " Aloes et Myrrh. B.P. .. | 1 0 | 46 | 4 3 | 49. " Antibilious .. | 1 6 | 70. " Analeptic .. | 2 0 | 9 3 |
| 29. " Aloes Socot. B.P. .. | 1 0 | 47 | 4 3 | 50. " Antidyspeptic .. | 2 3 | 71. " Anodyne .. | 2 3 | 10 6 |
| 30. " Assafet. Comp. B.P. .. | 1 3 | 48 | 4 3 | 51. " Aperient .. | 2 3 | 72. " Antichlorotic .. | 2 3 | 10 6 |
| 31. " Gambogiae Comp. B.P. .. | 1 0 | 49 | 4 3 | 52. " Camphore et Hyoscyami .. | 1 6 | 73. " Antichloromania .. | 2 3 | 10 6 |
| 32. " Cinnamon Sulph. 1 gr. .. | 1 8 | 50 | 4 3 | 53. " Cathartic Co. (Exotic) .. | 1 6 | 74. " Antispasmodic .. | 2 3 | 10 6 |
| 33. " " " 2 " .. | 3 0 | 51 | 4 3 | 54. " " (Improved) .. | 1 6 | 75. " Antiperiodic .. | 2 3 | 10 6 |
| 34. " " " 3 " .. | 4 3 | 52 | 4 3 | 55. " " (Vegetable) .. | 1 6 | 76. " Antispasmodic .. | 2 0 | 9 3 |
| 35. " Colocynth. Comp. B.P. .. | 2 0 | 53 | 4 3 | 56. " Emmenagogue .. | 3 0 | 77. " Astrucius .. | 2 0 | 9 3 |
| 36. " Colocynth. et Hyoscyami, B.P. .. | 2 0 | 54 | 4 3 | 57. " Ext. Belladonnae $\frac{1}{2}$ gr. .. | 1 0 | 78. " Cathartic (Cholagogue) .. | 2 0 | 9 3 |
| 37. " Conii Comp. B.P. .. | 1 3 | 55 | 4 3 | 58. " Ext. Nuc. Vomice $\frac{1}{2}$ gr. .. | 1 0 | 79. " Ecceprotic .. | 2 0 | 9 3 |
| 38. " Ferri Carb. B.P. .. | 1 3 | 56 | 4 3 | 59. " Ferri Iodid. .. | 2 0 | 80. " Laxativa .. | 2 0 | 9 3 |
| 39. " Hydrargyri, 3 gr. B.P. .. | 1 3 | 57 | 4 3 | 60. " Morphiae Sulph. $\frac{1}{2}$ gr. .. | 2 0 | 81. " Sedativa .. | 2 3 | 10 6 |
| 40. " Hydrarg. Subchlor. Co. B.P. .. | 1 3 | 58 | 4 3 | 61. " Neuralgic .. | 8 6 | 82. " Tonic .. | 2 0 | 9 3 |
| 41. " Ipecac. cum Scilla, B.P. .. | 1 3 | 59 | 4 3 | 62. " Opii, Camph. et Tannin .. | 2 3 | 83. " Hydrarg. 5 grs. .. | 1 6 | — |
| 42. " Plumbi cum Opi, B.P. .. | 2 0 | 60 | 4 3 | 63. " Podophyllin, $\frac{1}{2}$ gr. .. | 1 0 | 84. " Iodide of Mercury, $\frac{1}{2}$ gr. .. | 1 0 | 4 3 |
| 43. " Quinine, 1 gr. .. | 7 0 | 61 | 4 3 | 64. " Podophyllin Co. .. | 2 0 | 85. " Cathartic Co. .. | 1 6 | 6 9 |
| 44. " Saponis Comp. B.P. .. | 2 0 | 62 | 4 3 | 65. " Quin. et Ferri et Strychnia .. | 5 0 | 86. " Diuretic .. | 1 6 | — |
| 45. " Scilla Comp. B.P. .. | 1 3 | 63 | 4 3 | 66. " Quinine Sulph. 2 gr. .. | 13 8 | 87. " Ferri Pyrophos. 1 gr. .. | 1 3 | 5 6 |

† Price fluctuates with rates for Quinine.

SPECIAL RECIPES FOR 3,000 OR MORE MADE TO ORDER.

WARNER & CO.'S

SUGAR-COATED PHOSPHORUS PILLS.

A Perfect and Reliable form for the Administration of Free Phosphorus in combination with

Nux Vomica, Iron, Quinine, Zinc, Strychnia, Morphia, Indian Hemp, Cantharides, Digitalis, Aloes, &c.

Twenty-four combinations in Stock. Detailed Price List, giving the formulæ, may be had on application.

Price per 100 from 3s. to 8s.

For EFFICACY, PERFECTION, and FREEDOM from harm, Warner & Co.'s Pills of Phosphorus are unrivalled. The process originated and perfected by W. R. WARNER & Co., for the administration of Phosphorus in pill form, diffuses the Phosphorus, in its elementary state, thoroughly through the soft and non-resinous mass in a state of solution, a result by no other process attainable. The value of Phosphorus as a remedial agent is impaired if the element is not exhibited in its free state, and protected from oxidation by a perfect and impervious coating of pure white sugar. You are cautioned to avoid cheaper and inferior brands.

F. NEWBERRY & SONS, 37 Newgate Street, London, E.C.

The following hold Stock:—Grattan & Co., Belfast; Proctor & Son, Newcastle-on-Tyne; Raimes & Co., Edinburgh; Symes & Co., Liverpool; T. R. Lester, Cork; McMaster & Co., Dublin; McCaul, Londonderry; Botwright & Kemp, Islington; McIlwaine & Marshall, Newry, &c., &c., &c.

Foreign Advertisements.]

NATURAL MINERAL WATERS OF

VICHY

CELESTINS—The water of this Spring is very agreeable, sparkling, and slightly acidulated. Remedy for Complaints of the Kidneys, Gravel, Gout, Diabetes, Rheumatism, &c.

HAUTERIVE—This Spring contains a greater quantity of carbonic acid, and is especially recommended as a Table Water.

GRANDE-GRILLE—For Complaints of the Liver and Biliary Organs, Indigestion, &c.

HOPITAL—For Stomach Complaints, &c.

VICHY WATERS are pleasant to the taste, and may be drunk pure or mixed with Wine or Spirits.

CAUTION.—It is indispensable that all orders should state the name, WHICH IS ON THE CAPSULES, of the particular spring required.

VICHY DIGESTIVE LOZENGES.

MANUFACTURED FROM THE SALTS EXTRACTED FROM THE MINERAL WATERS OF VICHY.

The Vichy Lozenges should be taken by those persons whose digestion is difficult, painful, or laborious.

In cases of slow or difficult digestion, a few of the Lozenges should be taken before each repast.

The Lozenges are flavoured with peppermint, lemon, vanilla, rose, orange flowers or anisette.

Vichy Salts for Baths—In Packets sufficient for one Bath.

Vichy Barley Sugar—An excellent Digestive Bon Bon.

LONDON DEPOTS.—**INGRAM & ROYLE**, 119 Queen Victoria Street; **Gallais & Co.**, 27 Margaret Street, Regent Street; **Burgoyne, Burdidges & Co.**, 16 Coleman Street; **Hooper & Co.**, 7 Pall Mall East; **Best & Sons**, 22 Henrietta Street, Cavendish Square; **Evans, Lescher & Evans**, 60 Bartholomew Close; **Schweppe & Co.**, 51 Berners Street, W.

DUBLIN: **A. & R. Thwaites & Co.**

Sole Agent for Scotland: **ALEXANDER BROWN**, 10 Princess Square, Buchanan Street, Glasgow.

INJECTION BROU

HYGIENIC, INFALLIBLE, AND PRESERVATIVE.

The only remedy which cures, without additional means, is sold Wholesale by the Proprietor,

PHARMACIE FAVROT (J. FERRÉ),
102 RUE RICHELIEU, PARIS
(SUCCESSOR OF M. BROU DE LAVEYSSIERE),

And by every Chemist in the World.

Dr. A. VAUTHERIN, Chemist, 1st-Class, Ex-Interne of the Hospitals, and Lauréat of the Faculty of Medicine in Paris, attests that, having obtained almost constant success from the use of this Injection, which he invariably prescribes, he considers it a veritable SPECIFIC, in which one is obliged to have faith, from the fact that it cures infallibly.

Beware of spurious imitations. **WHOLESALE AGENTS for ENGLAND:**—**BURGOYNE, BURIDGES, CYRIAX & FARRIES**, 16 Coleman Street, and **WILCOX & CO.**, 336 Oxford Street, London.

Myers & Solomon,

GENERAL MERCHANTS,

Importers and Commission Agents,

Dealers in every description of DRUGS and PATENT MEDICINES

WAREHOUSE.....542 GEORGE STREET,

STORES.....390 PITT STREET,

SYDNEY, NEW SOUTH WALES.

ESTABLISHED 1858.

Consignments of all classes of Goods and Agencies will meet with every attention.

Catalogues, 76 pp. Svo., gratis and post free on application.

REFERENCES—Messrs. **H. & J. HART**, 155 Fenchurch Street, E.C.; Messrs. **HILL & HARTIDGE**, 43 & 41 St. Mary Axe; Mr. **HYMAN A. ABRAHAM**, 87 to 90 Houndsditch N.E.; Mr. **EUGENE RIMMEL**, 96 Strand, London.

F. H. FAULDING & CO., WHOLESALE DRUGGISTS,

Clarence Place, King William Street,

ADELAIDE;

And PORT ADELAIDE.

ESTABLISHED 1845.

ACETATE OF SODA

IN LARGE CRYSTALS.

| | | | | | |
|----------|---|---|--------|---|---------|
| Analysis | { | Anhydrous Acetic Acid, C ² H ³ O ² | 36.517 | } | 58.721 |
| | | Caustic Soda N ₂ O | 22.204 | | |
| | | Water of Crystallisation | 40.982 | | |
| | | Sulphate, Chloride, Carbonate, &c., | .279 | | |
| | | | | | 100.000 |

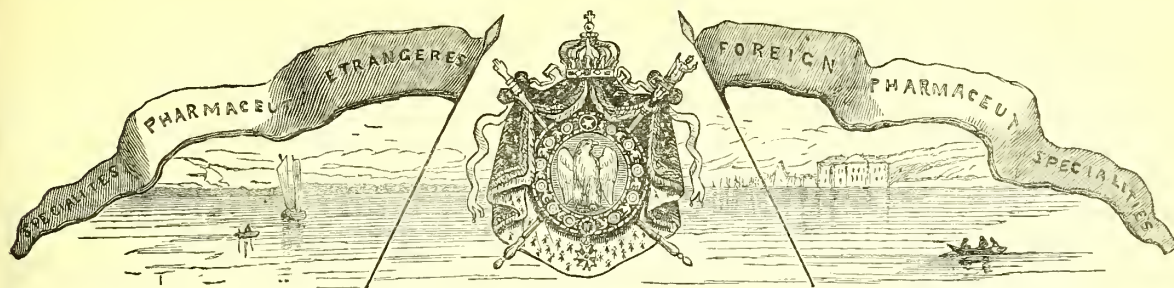
MEURGEY & Co., Manufacturers, Tarsul, Courtivron, Cote d'Or, FRANCE.

SOLUTION ODET.

Honoured by a Medal from the University of France.

Cures Phthisis, Consumption, &c., and is employed in the Civil and Military Hospitals of the Colonies.

M. C. ODET, Villette, near Vienne (Isère), FRANCE.
London: **JOZEAU, WILCOX, &c., &c.**



FOREIGN SPECIALITIES AND MEDICINES.

ROBERTS & CO.,

FOREIGN AND ENGLISH CHEMISTS, WHOLESALE IMPORT AND EXPORT AGENTS FOR
FOREIGN MEDICINES AND PATENTS,

76 NEW BOND STREET, LONDON.

Messrs. Roberts & Co. beg to inform the Trade that they are Agents for all the principal French and Foreign Specialities and Medicines, a large supply of which they have always on hand, and can supply on very favourable terms. They are in daily communication with their Paris House, and can offer exceptional facilities for procuring New Medicines, &c., &c., with very little delay.

The following is a list of a few that they name *au hazard*, and that have a large sale:—

| Retail | Per doz. | Retail | Per doz. | Retail | Per doz. | Retail | Per doz. |
|--------------------------------|----------|---------------------------------|----------|---------------------------------|----------|---------------------------------|----------|
| 00..Alcool de Menthe Ricques | ..42/ | 4/6..Capsules Raquin |30/ | 2/9..Grimault's Syrups |22/ | 6/0..Rabuteau's Elixir Ferrug. | ..48/ |
| 9..Ditto ditto | ..21/ | 4/6.. " Mathey Caylus | ..22/ | 2/3..Guyot's Goudron |17/ | 3/6.. " Sirop | ..27/ |
| 6..Aubergier's Syrup |27/ | 4/6..Chassaing's Wine |36/ | 11/..Laville's Gout Tincture | ..84/ | 4/6..Racahout |33/ |
| 9.. " Pâté |13/ | 2/9.. " Pills |25/ | 11/.. " Pills |84/ | 5/0..Reynal's Bougies |42/ |
| 6..Bay Rum |54/ | 4/6..Clin's Bromide Camph. Caps | 45/ | 2/3..Papier Fayard |13/ | 3/6..Ricord's Injection |24/ |
| 6..Ditto |27/ | 4/6.. " " Dragées | 45/ | 1/1 1/2..Ditto |6/6 | 4/6.. " Capsules |34/ |
| 6..Belloc's Charcoal |16/ | 2/9..Dusart's Syrups |27/ | 4/6..Papier Fruneau |27/ | 8/0.. " Syrup |72/ |
| 9.. " Lozenges | 13/ | 4/6.. " Wines |36/ | 2/3..Ditto |15/ | 2/0..Star Paper |15/ |
| 6..Blancard's Pills |30/ | 5/0..Eau Botot |42/ | 1/9..Pâté Aubergier |13/ | 2/6..Tamar Indien |21/ |
| 9..Ditto |18/ | 3/0..Ditto |26/ | 1/9.. " de Georgé |13/ | 2/9..Vallet's Pills |24/ |
| 6..Bron's Injection |26/ | 2/3..Espie's Cigarettes |15/ | 1/1 1/2..Ditto |8/6 | 1/6..Ditto |13/ |
| 6..Bugeand's Wine |36/ | 2/9..Flon's Syrup |23/ | 1/9.. " de Berthé |15/ | 4/6..Veloutine (White and Rose) | 39/ |
| 6..Bully's Vinegar |33/ | 2/6..Gayetty's Paper |18/ | 1/9.. " de Nafé |13/ | 3/6..Ditto ditto | 30/ |
| 3..Ditto |17/ | 2/3..Granules Arsen. Acid |15/ | 1/9.. " Regnaud |13/ | 3/0..Vichot's Trochisques | ..27/ |
| 6..Candé's (Leit Antéphilique) | 40/ | 2/3.. " Iron |15/ | 6/0..Pierlot's Valerian |54/ | 4/6..Valentine's Meat Juice | ..45/ |
| 6..Capsules Bromide of Camph. | 45/ | 2/3.. " Soda |15/ | 2/9..Rabuteau's Dragées Ferrug. | 27/ | 4/6..Vin Mariani |45/ |
| 6.. " Matico |30/ | | | | | | |

Above prices *do not* include stamps; in those cases where they are necessary they will be supplied and charged extra.

M. Roberts & Cie. ont l'honneur d'informer MM. les Pharmaciens Spécialistes de France et de l'Étranger qu'ils se mettent à leur disposition pour des dépôts qu'ils voudraient établir à Londres. On peut avoir tous renseignements en s'adressant à leur maison de Londres ou à Paris.

House in Paris, ROBERTS & CO., Place Vendome, 23.

ESTABLISHED 1823.

PARIS 1867.

MEDAILLE D'OR

MEDAILLE UNIQUE

LYON 1872.

MEDAILLE D'OR

VIENNE 1873.

MEDAILLE DE MERITE

PHILADELPHIE 1876

1^{re} MEDAILLE

BOUDAULT'S PEPSINE

THE PARIS HOSPITALS HAVE USED NO OTHER

Since the introduction of Pepsine by Boudault and Dr L. Corvisart, Boudault's Preparations have been considered the most reliable.

The Jury of the International Exhibition, Paris, 1867, awarded to Boudault's Preparations the only Medal given for Pepsine. Since that time it has taken the Medal at each of the International Exhibitions — Havre, Lyons, Vienna, Philadelphia.

Boudault's Pepsine — dose, 5 to 10 grains.
 Also Neutral Pepsine — Pepsine with Morphia — Pepsine with Strychnia — dose, 5 to 10 grains.
 Pepsine Wine, in bottles 4/ and 8/ — dose, a tablespoonful. Pepsine Elixir, in bottles, 4/ — dose, a tablespoonful.
 Pepsine Lozenges, in bottles, 3/. Pepsine Pills, in bottles, 3/.

JOTTOT BOUDAULT, 7, Avenue Victoria, Paris. P. & P. W. SQUIRE, 277, Oxford Street, London.
 MAY BE HAD OF ALL CHEMISTS.

Foreign Advertisements—continued.

CHOCOLAT MENIER FOR BREAKFAST.

AWARDED THE HIGHEST PRIZE AT THE PARIS EXHIBITION, 1878.

CHOCOLAT MENIER FOR LUNCHEON.

AWARDED THE HIGHEST PRIZE AT THE PARIS EXHIBITION, 1878.

MENIER'S COCOA

REQUIRES NO BOILING.

Sold in $\frac{1}{4}$ lb., $\frac{1}{2}$ lb. Packets, & 1 lb. Tins, by Grocers, Confectioners, and Chemists.

AWARDED THE HIGHEST PRIZE AT THE PARIS EXHIBITION, 1878.

MENIER'S ESSENCE OF COCOA

REQUIRES NO BOILING.

Sold in $\frac{1}{2}$ lb. and 1 lb. Tins, by Grocers, Confectioners, and Chemists.

AWARDED THE HIGHEST PRIZE AT THE PARIS EXHIBITION, 1878.

MENIER'S CHOCOLATE POWDER

REQUIRES NO BOILING.

Sold in $\frac{1}{2}$ lb., 1 lb., and 2 lb. Tins, by Grocers, Confectioners, and Chemists.

AWARDED THE HIGHEST PRIZE AT THE PARIS EXHIBITION, 1878.

CHOCOLAT MENIER

Annual Consumption exceeds 17,000,000 lbs.

AWARDED TWENTY-THREE PRIZE MEDALS from 1832 to 1878.

The Healthiest, Best, and Most Delicious Aliment for Breakfast known since 1825; defies all honest competition. Unadulterated, Highly Nutritious, and Pure.

WHOLESALE: SOUTHWARK STREET AND WORCESTER STREET, BOROUGH.

INJECTION BROU EAU DE SUEZ CIGARS DE JOY

SOLE AGENTS FOR THE UNITED KINGDOM,
WILCOX & CO., 336 OXFORD STREET, LONDON.
Special Prices for Large Buyers. Shipped for Export, Unstamped.

THE ACME OF PERFECTION.

SHAPED PLASTERS.

Emp. Belladonna, Opium, &c.

Spread on White Leather, with

ADHESIVE MARGIN.

| Shape | Size | Shape | Size |
|--------|------------------------------------|------------|------------------------------------|
| Square | $4\frac{1}{2} \times 5\frac{1}{2}$ | Oblong | $6\frac{1}{2} \times 11$ |
| Oval | 5×7 | " | $7 \times 13\frac{1}{2}$ |
| Saddle | $4\frac{1}{2} \times 9\frac{1}{2}$ | Heart | 5×7 |
| Oblong | $4\frac{1}{2} \times 7$ | " | $6\frac{1}{2} \times 8\frac{1}{2}$ |
| " | $5\frac{1}{2} \times 9\frac{1}{2}$ | For Breast | 7 diameter |
| " | $6 \times 8\frac{1}{2}$ | | |

Terms on application to the Sole Manufacturers,

GOOSEY & ROGERS, Chemists,
Stepney, London, E.

Can be ordered through any Wholesale House.

CHEMIKER - ZEITUNG. CÖTHEN.

Wöchentlich erscheinendes Fachblatt

Für Chemiker, Techniker, Fabrikanten, Apotheker
und Ingenieure.

Correspondenzblatt chemisch-technischer Vereine.

CHEMISCHES CENTRAL - ANNONCENBLATT.

Herausgegeben u. verlegt von Dr. G. KRAUSE
in Cöthen.

Durch alle Postanstalten (1. Nachtrag, 1. Abtheilung 855a verzeichnet) und Buchhandlungen des In- und Auslandes zu beziehen. Preis vierteljährlich 3 M., durch die Exped. d. Bl. unter Streifband 4 M., Ausland 5 M.—Der Raum der einspaltigen Zeile 30 Pf., erbeten durch die Expedition des Blattes in Cöthen od. alle Annoncen-Expeditionen. BEILAGEN werden angenommen.

Die CHEMIKER-ZEITUNG, in wöchentlichen Heften von 3 Bogen Quartformat erscheinend, dient dem Chemiker, Techniker, Apotheker und den vorwärtigen Industriellen als Fachblatt. Demgemäss bringt sie chemische, technische und volkswirtschaftliche Original-Abhandlungen, Original-Correspondenzen, wöchentliche Auszüge aus den chemisch-technischen, analytischen und pharmaceutischen Zeitschriften des In- und Auslandes, industrielle Notizen, Marktberichte, Preis- und Exportlisten, sonstige Handelsberichte und statistische Angaben, Mittheilungen über chemische Patente, aml. Verordnungen, die chemische Industrie betreffend, Fachliteratur nebst Kritiken, und schliesslich einen Fragekasten. Probenummern stehen kostenfrei zur Verfügung.

*Foreign Advertisements—continued.]***BAUDON'S RESTORATIVE TONIC WINE.****Prescribed with Great Success in Consumption and Wasting Diseases, &c.**The **Lancet** recommends it as a substitute for Cod Liver Oil in pulmonary and other complaints.The **Medical Times and Gazette** says—"In our Hospital Reports of May 12th, 1877, we reported a case of pulmonary disease in the London Hospital, in which very marked improvement took place during the exhibition of this wine, without any other medical treatment. It is a very agreeable remedy, the basis being a pure muscat wine, and its usefulness is attested by the names of physicians and surgeons of high standing and repute."The **London Medical Record** says—"It is a wine of most agreeable flavour and good alcoholic strength, and is recommended as an agent in strumous and phthisical diseases. A considerable amount of evidence of its effects is said to have been accumulated in the experience of Dr. Labbé, senior surgeon to La Pitié, Dr. Gombault, Dr. Molland, senior physician of the Hospital St. Antoine, Dr. Jules Worms, and in this country by Dr. Langdon Down, Dr. Thorowgood, and other well-known physicians. Its peculiarly agreeable character, and favourable influence on the digestion are especial recommendations of the 'Vin de Baudon.'"The **Sanitary Record** says—"It is extensively used in the Paris Hospitals as a tonic and restorative in phthisis, strumous disease, and after severe surgical operations."

May be obtained of all the principal Chemists. Price, stamped, 4s. 6d. per bottle.

SOLE ENGLISH AGENTS—

**PAGNY, WALLACE & CO., 48 Finsbury Circus.****KEMPTHORNE, PROSSER & CO.**

(SUCCESSORS TO H. E. YOUNGMAN & CO.),

WHOLESALE DRUGGISTS,**DRUGGISTS' SUNDRYMEN,****IMPORTERS AND COMMISSION MERCHANTS,****Dunedin and Auckland, New Zealand.**

Liebreich's Syrup of Chloral.—An obvious and necessary preventative of accidents from Chloral is to sell and dispense only a **UNIFORM and GUARANTEED** preparation, such as **LIEBREICH'S SYRUP**, which has received the approval of the general Medical Press in Great Britain. The strength and dose is the same as that of the official preparation, viz., Ten Grains of Chloral in each Fluid Drachm. Bottles bearing Dr. O. Liebreich's Signature and the name of Corbyn, Stacey & Co., 2s. and 3s. 6d. each; and 1 pound bottles for Dispensing.

Pepsin-Essenz-Liebreich.—"The researches of Panum and Preyer have shown that of the various solutions the best is the Pepsin-Essenz of Oscar Liebreich." Bottles, 3s. each, bearing the name of the **SOLE AGENTS, Corbyn, Stacey & Co.**

Chaulmoogra Oil.—This oil is the official remedy in India for Leprosy, Scrofula, Skin Diseases, and Rheumatism; Secondary Syphilis has also been successfully treated with it. It is subject to constant adulteration. **CORBYN & Co.'s Oil** is expressed from the **fresh seeds**; and is pure. See the *Pharmacopœia of India*, and also Mr. Lepage's Pamphlet (post free 1s.). Bottles, 4s. 6d. Perles or Small Capsules, Boxes, 2s. 6d.; Ointment in Pots, 1s. 9d., 3s., 10s. 6d. each.

Phosphorus Perles, $\frac{1}{30}$, $\frac{1}{60}$, or $\frac{1}{100}$ th of a grain of Phosphorus in each. Neither taste nor smell of Phosphorus is perceived by the patient. Bottles, 2s., 2s. 6d., and 6s. each.

Damiana.—Liquid Extract.—A powerful non-poisonous nervous stimulant and aphodisiac. 12s. per pound.

CORBYN, STACEY & CO.,**Wholesale and Export Druggists,****300 HIGH HOLBORN, LONDON, W.C.***A General Prices-Current will be sent to the Trade on application.*

Foreign Advertisements—continued.]

THE BOSTON JOURNAL OF CHEMISTRY

Has been established Eleven years, and, as a medium for furnishing the current Scientific and Chemical topics and news of the day, in a popular and attractive form, it has no rival in the English language.

With the **Largest Circulation** of any Chemical and Popular Science Periodical in the World, it has long received the indorsement and support of the **leading Physicians, Druggists, Chemists, Artists, Mechanics, Farmers, Manufacturers, and Scientific men in the country.**

Published Monthly, and sent, postage paid to the United States and Canada, for One Dollar in currency, or to any other part of the World for Five Shillings.

ADVERTISEMENTS

Are inserted at very low rates, which will be furnished direct from the Office, or by THE CHEMIST AND DRUGGIST, 44A Cannon Street, London, England.

Specimen Copies sent Free to any part of the World.

Address all communications to

JOURNAL OF CHEMISTRY CO.,
125 MILK STREET, BOSTON, MASS.,
AMERICA.

THE DRUGGISTS' CIRCULAR & CHEMICAL GAZETTE

Is Published Monthly, at

36 BEEKMAN STREET, NEW YORK,

SEVEN SHILLINGS and SIXPENCE Sterling, postage prepaid.

The **Druggists' Circular** usually contains from 32 to 42 quarto pages of extra large size consisting of literary matter and advertisements. It has reached the 21st year of publication, and has, probably, a much larger circulation than any similar periodical issued in the United States.

SCHEME OF ADVERTISING RATES:—

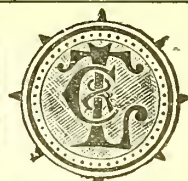
| | | | | | | | | | | | | | |
|---------------------|-------------------|-----|-----|-----|----|---|---|-------------------|-----|-----|-----|---|---|
| One Page. | For 12 insertions | ... | ... | £88 | 0 | 0 | Fourth of Page, One Column. | For 12 insertions | ... | ... | £30 | 0 | 0 |
| | " 6 " | ... | ... | 48 | 0 | 0 | | " 6 " | ... | ... | 17 | 0 | 0 |
| | " 3 " | ... | ... | 26 | 0 | 0 | | " 3 " | ... | ... | 10 | 0 | 0 |
| | " 1 " | ... | ... | 10 | 10 | 0 | | " 1 " | ... | ... | 4 | 0 | 0 |
| Half of Page. | For 12 insertions | ... | ... | £50 | 0 | 0 | Eighth of Page, Half- Column. | For 12 insertions | ... | ... | £16 | 0 | 0 |
| | " 6 " | ... | ... | 30 | 0 | 0 | | " 6 " | ... | ... | 9 | 0 | 0 |
| | " 3 " | ... | ... | 17 | 0 | 0 | | " 3 " | ... | ... | 5 | 0 | 0 |
| | " 1 " | ... | ... | 6 | 0 | 0 | | " 1 " | ... | ... | 2 | 0 | 0 |

Advertisements occupying less than half a column of space are charged for at SEVENPENCE a line for One insertion; for Three or more insertions, FIVEPENCE a line for each.

Subscriptions and Advertisements can be arranged for in Great Britain through "THE CHEMIST AND DRUGGIST," 44a Cannon Street, London.



MEDICATED PAPERS



TRADE MARK.

TRADE MARK.

We have just landed two shipments of "Mortimer's Bromo" and "Gayetty's" Paper, and beg to subjoin prices.

171A & 171B ALDERSGATE STREET, E.C.

LYNCH & CO.

MORTIMER'S BROMO PAPER, for Water Closet.

In Cases containing 50 Packets of 1,000 Sheets 65s. per Case.

" " 50 " 500 " 46s. "

GAYETTY'S PAPER. In Cases containing 50 Packets of 500 Sheets 68s. "

NET CASH.

SEABURY & JOHNSON'S INDIARUBBER POROUS PLASTERS.

LYNCH & CO. have pleasure to subjoin their Cash Prices, and solicit Orders:—

Seabury & Johnson's Medicated Indiarubber Porous Plasters:—

| | | PER DOZ. NET. | | | | | | | |
|--|-----|---------------|----|----|---|-----|---|----|-----------------|
| Size, $7\frac{1}{2} \times 5$ in. 2 doz. in box. | | £ | s. | d. | | | | | |
| Aeonite | ... | 0 | 4 | 3 | Iron | ... | 1 | 3 | 6 |
| Aeonite and Belladonna | ... | 0 | 5 | 3 | Mercurial | ... | 1 | 13 | 6 |
| Arnica | ... | 0 | 3 | 4 | Opium, B.P. | ... | 1 | 18 | 6 |
| Belladonna | ... | 0 | 3 | 10 | Witch Hazel | ... | 1 | 13 | 6 |
| Benson's Capeine | ... | 0 | 7 | 0 | Surgeons' Rubber Adhesive— | | | | |
| Capsicum | ... | 0 | 4 | 3 | Cotton, plain or porous, 7 in. wide, | | | | |
| Galbanum, B.P. | ... | 0 | 4 | 3 | 1 yd. lengths | ... | 0 | 15 | 0 |
| Iron | ... | 0 | 3 | 4 | Twilled linen, plain, 6 in. wide, 1 yd. | | | | |
| Opium | ... | 0 | 5 | 9 | lengths | ... | 1 | 14 | 0 |
| Pitch Burgundy, B.P. | ... | 0 | 3 | 4 | Surgeons' Isinglass— | | | | |
| Poor Man's | ... | 0 | 3 | 4 | Cotton, $11\frac{1}{2}$ in. wide, 1 yd. lengths | ... | 0 | 13 | 0 |
| Strengthening | ... | 0 | 2 | 8 | " " 5 yd. lengths | ... | 2 | 12 | 6 |
| Warming... | ... | 0 | 4 | 3 | Bunion Plasters, 6 in box | ... | 0 | 5 | 3 |
| Witch Hazel | ... | 0 | 5 | 9 | Corn Plasters, 12 in box | ... | 0 | 5 | 3 |
| OROUS, 1 yd. lengths, 7 in. wide. | | | | | Mustard Plasters, 3 in pkt. | 6d. | 0 | 2 | 7 |
| Belladonna | ... | 1 | 7 | 0 | " " 6 in pkt. | 1/- | 0 | 5 | 3 |
| Capsicum | ... | 1 | 7 | 0 | " " 10 in box | 1/6 | 0 | 8 | 9 |
| OROUS, 5 yd. lengths, 5 in. wide. | | | | | " " 6 in. wide, $\frac{1}{2}$ yd. lengths | 0 | 5 | 3 | |
| Belladonna | ... | 4 | 9 | 0 | " " 6 " 1 yd. lengths | 0 | 8 | 9 | |
| Capsicum | ... | 4 | 19 | 0 | Court Plasters, silk, 6 in. wide, 1 yd. | | | | |
| Strengthening | ... | 3 | 5 | 6 | lengths. Black, Flesh-colour and | 1 | 1 | 0 | |
| OROUS, 1 yd. lengths, 5 in. wide. | | | | | White | ... | | | |
| Strengthening | ... | 0 | 15 | 0 | In Fancy Wood Cases, tricoloured, 1/- | 0 | 6 | 6 | |
| ON-POROUS, 1 yd. lengths, 7 in. wide. | | | | | Arnica, Gelatine Cases | 1/- | 0 | 6 | 0 |
| Aeonite | ... | 1 | 3 | 6 | Balsamic, Cascd | 2d. | 0 | 0 | 10 |
| Arnica | ... | 1 | 3 | 6 | Centennial Cascd, tricoloured, 6d. | ... | 0 | 3 | 0 |
| Belladonna, B.P. | ... | 1 | 3 | 6 | Elegant Envelopes | 6d. | 0 | 2 | 8 |
| Blister, B.P. | ... | 1 | 3 | 6 | Golden Eagle, Wrappers, Black, Flesh- | | | | |
| Capsicum | ... | 1 | 3 | 6 | colour, and White, 3d. | ... | 0 | 1 | 9 |
| | | | | | One Penny, Envelopes, Black, Flesh- | | | | |
| | | | | | colour, and White | ... | 0 | 0 | 3 $\frac{1}{2}$ |

LYNCH & CO.,

171a and 171b ALDERSGATE ST., LONDON, E.C.

PRECIPITATED CHALK.

Guaranteed Finest and Purest Quality.

MANUFACTURED BY LEVERMORE BROTHERS,

13 CULLUM STREET, LONDON.

Being the largest Manufacturers, are prepared to execute orders at a special reduction in price.

APPLICATIONS FROM BUYERS ARE INVITED.

THE NORTH BRITISH CHEMICAL CO., Limited, GLASGOW AND LONDON.

OFFICES—

LONDON:
12 MARK LANE.

GLASGOW:
149 HOPE STREET.

GEORGE PUGH, AGENT.

MEDALS AWARDED.

SOCIETY OF ARTS 1862.
LONDON 1862.
DUBLIN 1865.
PARIS 1867.
HAVRE 1868.
VIENNA 1873.

WORKS—

WHITECROOK, CLYDEBANK.
MIDDLETON, TYREE.
LOCH EPORT, NORTH UIST.
FREAUGH, MILTOWN MALBAY.
E. C. C. STANFORD, MANAGER.

MANUFACTURERS OF
IODINE AND RESUBLIMED IODINE.
IODIDE AND BROMIDE POTASSIUM.
CHLORATE POTASH.

CAUSTIC SODA, WHITE, 60%.

SEAWEED CHARCOAL, &c.

THE TRADE SUPPLIED THROUGH the LONDON and PROVINCIAL WHOLESALE DRUG HOUSES.
MERCHANTS AND SHIPPERS CAN OBTAIN TERMS ON APPLICATION TO

GEORGE PUGH, Sole Agent, Dunster House, 12 Mark Lane, London, E.C.

NOTICE.

PATENT MALACHITE GREEN.

We the undersigned, owners of Letters Patent for the manufacture of a new green colouring matter, called **MALACHITE GREEN**, No. 828 of the year 1878, beg to call the attention of the public to the fact that endeavours to infringe our patent rights have been made by some Continental manufacturers.

In consequence hereof we hereby give notice that proceedings will forthwith be taken by us against any person found to be infringing our said patent rights, whether by making or by purchasing, selling or importing, or being concerned in importing, or in any way using within the United Kingdom Malachite Green other than that manufactured or imported by us or by our licensees, Messrs. Meister, Lucius & Brünig, under our or their respective trade marks and labels. A reward will be given by us to any person who will give information against infringers sufficient to enable us to take legal proceedings against them.

THE MALACHITE GREEN may be obtained either directly from us or through every respectable druggist or broker of chemicals and colours.

ACTION GESELLSCHAFT FÜR ANILIN FABRIKATION, BERLIN, GERMANY.

CHEMISTS AND MANUFACTURERS

Are solicited, before purchasing **FILTER-PRESSES**, to examine the merits of

JOHNSON'S PATENT HYDRAULIC FILTER,

And see whether, for **CORRECTNESS OF PRINCIPLE, DESIGN, CONVENIENCE AND ECONOMY IN WORKING, SOLIDITY AND EXCELLENCE OF WORKMANSHIP, AND LOWNESS OF PRICE**, it is not by far

THE BEST, CHEAPEST, & MOST RAPID MEANS OF FILTRATION IN THE MARKET.

For **SEPARATING SOLIDS FROM SEMI-FLUIDS, FILTERING LIQUIDS BRIGHT, WASHING PRECIPITATES, DRYING PRECIPITATES, SLURRY OR SLUDGE**, in any quantities, with great economy in cloths, which never burst, and are easily removed for cleaning when required.

These are advantages which command its adoption over every other form of Filter.

TRIALS AT THE WORKS MADE GRATIS IN PRESENCE OF INTENDING PURCHASERS

Small Filter-Press for Laboratory Use, with Pump complete, from £7.

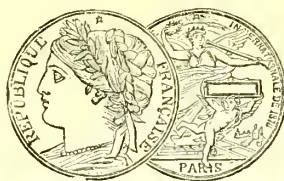
JOHNSON'S ENGINEERING WORKS, CARPENTER'S ROAD, STRATFORD.

London Offices—**N. NUTTER, 71 Cornhill, E.C.**

TRADE MARK.



SILVER MEDAL,
INTERNATIONAL
EXHIBITION,
PARIS, 1878.



SILVER MEDAL,
INTERNATIONAL
EXHIBITION,
PARIS, 1878.

Established
1654.

GEORGE ATKINSON & CO.,

(Late ATKINSON & BIGGAR),

CHEMISTS, DRUG GRINDERS, &c.,

66 Aldersgate Street, London, E.C.,

Manufacturers of

Potass. Iodid., Potass. Bromid., Ammon. Bromid., Iodine Resublimed,
AND OTHER CHEMICALS.

CAMPBOR REFINERS. LINSEED CRUSHERS.

All our preparations, guaranteed pure, can be obtained of any of the leading Wholesale Druggists throughout the United Kingdom.

T. MORSON & SON,

1, 33, & 124 SOUTHAMPTON ROW, RUSSELL SQUARE, W.C

Works:—Hornsey Road, N., and Summerfield Works, Homerton, E., London.

Medals awarded at the LONDON, PARIS, and PHILADELPHIA EXHIBITIONS (Juror, 1862).

MANUFACTURERS OF

PREPARATIONS OF PEPSINE, PURE CHEMICALS, AND ALL NEW MEDICINES

SPECIALITIES:—

MORSON'S PEPSINE PREPARATIONS.
MORSON'S PEPSINE PORCI PURE.
MORSON'S PEPSINE POWDER OR POUDRE NUTRITIVE.
MORSON'S PEPSINE WINE.
MORSON'S PEPSINE LOZENGES.
MORSON'S PEPSINE GLOBULES.
MORSON'S PEPTIC FOOD FOR INFANTS.
MORSON'S PANCREATINE POWDER.
MORSON'S PANCREATIC EMULSION.
MORSON'S PANCREATISED COD-LIVER OIL.
MORSON'S PHOSPHORISED COD-LIVER OIL.
MORSON'S SACCHARATED WHEAT PHOSPHATES.

MORSON'S CREOSOTE (from Wood Tar). The only English Makers.
N.B.—Test of Purity—Insoluble in Price's Glycerine.

MORSON'S GELATINE. (The most economical substitute for Isinglass)
MORSON'S CHLORODYNE.
MORSON'S CHLOROFORM (from Pure and Methylated Spirit).

We guarantee our Chloroform, prepared from Methylated Spirit, to be "Pure" Chloroform, and to answer all the tests of the Pharmacopœia

MORSON'S EFFERVESCING CITRATE OF MAGNESIA.
MORSON'S ARTIFICIAL ESSENCES FOR FLAVOURING.

Sold Wholesale and Retail by all Chemists and Druggists throughout the World.

GOLD MEDAL, PARIS, 1878.

T. & H. SMITH & CO.,

EDINBURGH & LONDON,

MANUFACTURERS OF

SALTS OF MORPHIA, PURE CHLOROFORM,

SALICINE, &c.

**PRECIPITATED CHALK,
WHITEST AND PUREST QUALITY,**

MANUFACTURED BY DUNN & COMPY.

(LATE OF PRINCES SQUARE, FINSBURY),

MANUFACTURING CHEMISTS,

**STIRLING CHEMICAL WORKS
WEST HAM, E.**



**BURGESS, WILLOWS & FRANCIS,
WHOLESALE & EXPORT DRUGGISTS,
AND
MANUFACTURING PHARMACEUTICAL CHEMISTS,
101 HIGH HOLBORN, LONDON.**

Price Lists sent on application. Special quotations given for
Shipping Orders.

BI-SULPHIDE OF CARBON,

In Strong Iron Drums for Export.

GAS PURIFICATION & CHEMICAL CO. (Limited),

161, 162, 163 PALMERSTON BUILDINGS, OLD BROAD ST., LONDON, E.C.

DUNCAN, FLOCKHART & CO.,

Wholesale and Export Druggists, Edinburgh.

CHLOROFORM

Prepared from Pure and Methylated Spirit.

Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle.

For Export, in bottles corked and luted (stoppers attached) and in hermetically sealed flasks when required.

N.B.—We guarantee our Chloroform prepared from METHYLATED SPIRIT to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

CHLORIC ETHER.

LIQUOR RHEI DULC.

LIQUOR SENNÆ DULC.

SYR. FERRI PHOS. CO. (PARRISH).

Fluid Extracts, Concentrated Infusions, and all Pharmacopœial Preparations.

MANUFACTURERS OF THE CELEBRATED

Blue Black Writing Ink and Copying Ink.

SHIPPERS SUPPLIED ON LIBERAL TERMS.

White Gutta Percha for Stopping Teeth, in 6d. and 1s. Boxes.

Medicated Pessaries, Suppositories, and Bougies, prepared with either Cacao Butter or Gelatine.

DUNCAN, FLOCKHART & Co.'s shape—the Minié bullet—approved by the Medical Faculty throughout the country.

J. F. MACFARLAN & CO.,

EDINBURGH AND LONDON,

Manufacturers of

MORPHIA AND ITS SALTS,

And all Products from Opium; also

PURE CHLOROFORM,

Answering all the Tests of the British Pharmacopœia.

extensively used in the Hospitals and by Private Practitioners, and is rapidly superseding the expensive Alcoholic Preparation.

MAY BE HAD FROM ALL THE WHOLESALE HOUSES, AND AT

17 North Bridge, Edinburgh, and 5 Barge Yard, Bucklersbury, London.

PERSONALLY PREPARED BY THE INVENTOR.

LIQUOR BISMUTHI

(SCHACHT).

carefully Purified from Arsenic, Copper, Silver, &c. (DOSE, 3j., diluted.)

SYRUPUS CINCHONÆ ALCOHOLICUS

(SCHACHT).

BARK MINUS WOODY FIBRE (Dose, 3ss. to 3j.)

Drachm contains the entire medicinal properties of 20 grains of finest Cinchonæ Bark.

PILULE OF MONOBROMIDE OF CAMPHOR

(SCHACHT).

containing respectively 2, 3, or 4 grains of "Monobromide of Camphor" in each.

MANUFACTURED IN THE LABORATORY OF

SCHACHT and TOWERZEY, Clifton, Bristol,

And to be obtained of all WHOLESALE DRUGGISTS in LONDON and the PROVINCES.

EVANS, SONS, & CO.,

56 Hanover Street,

LIVERPOOL;**H. SUGDEN, EVANS & CO.,****MONTREAL;****WHOLESALE AND EXPORT DRUGGISTS.****EVANS, LESCHER, & EVANS,**

72 & 74 Golden Lane, Barbican,

LONDON;

ILLUSTRATED EXPORT LISTS,

(About 150 pages each) containing Prices of Drugs, Chemicals, Pharmaceutical Preparations, Druggists' Sundries, and Patent Medicines, etc., are Published on January 1st and July 1st in

ENGLISH,

and on April 1st and October 1st in

SPANISH,

and will be sent Post Free to any part of the World on application.

The above Lists offer unusual advantages as a Medium for Advertisements.

Makers of Proprietary Medicines, Perfumers, &c., by advertising in same, will have their specialties brought prominently under the notice of dealers in all parts of the world. Terms for advertising (which are strictly moderate) may be obtained by applying to Messrs. EVANS, SONS & CO., 56 Hanover Street, Liverpool. All Advertisements translated into Spanish free of charge.

R. Pulv. Opium Rect
(Swan & Proctor)

RECTIFIED OPIUM

Is Turkey Opium of Standard Quality.

It is distinguished from crude Opium of commerce by its freedom from Narcotine, Fat, Caoutchouc, and odorous matter, and by its unvarying strength as regards Morphia, of which alkaloid it invariably contains 10 per cent. when powdered, or 9 per cent. when in mass.

The Trade will find the above Powder the most satisfactory kind of Opium for preparing the tincture, sedative solution, and, indeed, for every pharmaceutical preparation into which Opium enters.

Present Price—Powder, 30s. per lb.; Mass, in 1-lb. Blocks, 27s., subject to fluctuation.

To be had through all Wholesale Firms, or from the Patentees,

SWAN & PROCTOR,
 MANUFACTURING PHARMACISTS,
 NEWCASTLE-ON-TYNE.

THOMAS WHIFFEN

(Successor to JACOB HULLE),

BATTERSEA, LONDON,

MANUFACTURER OF

QUINETUM,

The Alkaloids of East Indian Red Bark (*Chinchona Succirubra*), Quinine, Cinchonidine, Cinchonine and Amorphous Quinine.

QUINETUM SULPHATE,

The Crystallizable Sulphates of the Alkaloids of *Chinchona Succirubra*.

The above Preparations are very valuable remedial Agents, at a cost of LESS THAN HALF that of QUININE.

QUININE SULPHATE,

White and Unbleached.

STRYCHNINE

(HULLE's), and its Salts.

SALICINE.

WYLEYS & CO., COVENTRY,

LABORATORIES AND DRUG MILLS AT COVENTRY.

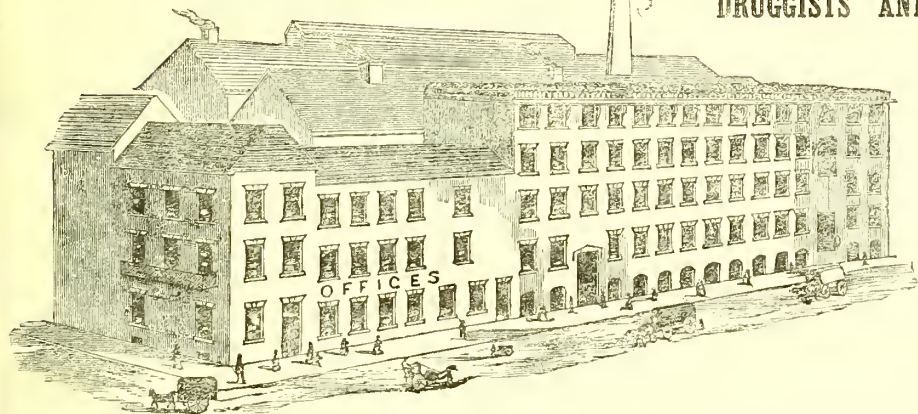
AND 223 UPPER THAMES ST., E.C.

(ESTABLISHED 1790.)

WHOLESALE AND EXPORT
DRUGGISTS AND DRUG GRINDERS.

MAKERS OF THE FOLLOWING
SPECIALITIES:

Myrtus Chekan Infusion—
Fluid Extract and Fluid (see
Phar. Journal, Feb. 8, 1879).
Oleum Morrhuæ cum Calcis
Hypophos.
Chino Quinine.
Extractum Filicis Maris Liq.
(from Native Rhizomes).
Extractum Cocœ Liq.
„ Gelsem. Semp. Liq.
„ Guarana Liq.
Liq. Bisthmuthi (Wyley).
Spts. Ether Nit.
Sp. Ammon. Aromat.
Extracts of all kinds.
Concentrated Infusions.
Granular Preparations, &c.



BATTLE'S

Liquor Opii Sedat., Liquor Cinchon. Cord., Liq.
Cinchon. Pallid., et Liquor Secalis Cornuti.

Messrs. BATTLE & WATTS

(Successors to the late RICHARD BATTLE, and the only makers of his Liquors)

Caution the Public against using any Preparations under the above name, unless the autograph of "RICH. BATTLE" is over each Cork and on the Label attached to each Bottle, *without which none is genuine.* The above are only prepared at the Laboratory, Cripplegate, London, by BATTLE & WATTS.

The following Paper by HENRY DEANE, F.L.S., and HENRY B. BRADY, F.L.S., was read, amongst others, at the Bath Meeting of the British Pharmaceutical Conference, September 1864:—

LIQUOR OPII SEDATIVUS.

The striking appearance resulting from the evaporation of Battle's Sedative (Plate III., Fig. 1) first drew our attention to the mode of investigation now described. We have examined it frequently and always have met with the same characters. The slides present an almost opaque mass of crystals of morphine salts and codeine, with a very small portion of narcotine (and meconic acid?), and so far as we have observed, complete absence of resinous matter and narcaine. *Anyone who has studied the microscopic characters of this preparation will readily understand how it has kept its place with the profession in spite of the cheap imitations which have been so largely puffed as substitutes for it.* Though we have experimented much with a view to preparing a similar liquor, we have not yet arrived at an identical result. Of three makes which we have examined, one (Plate III., Fig. 5) is largely charged with resinous matter, and the proportion of crystalline constituents is so minute that we are satisfied its activity must be very small; another (Plate III., Fig. 4) gives a few morphine crystals, a good deal of narcotine, and more narcaine; a third (Plate III., Fig. 6) is chiefly remarkable for its lack of everything crystalline.

32 Lower Whitecross Street, Cripplegate, London.

DRUGS, CHEMICALS, AND PHARMACEUTICAL PREPARATIONS.

BARRON, SQUIRE & CO.

(LATE DREW, BARRON, & CO.),

WHOLESALE & EXPORT DRUGGISTS,
BUSH LANE, LONDON, E.C.,

MANUFACTURERS OF ALL DESCRIPTIONS OF PHARMACEUTICAL PREPARATIONS,

Beg to inform Merchants, Shippers, &c., that all Indents entrusted to them will receive careful attention and prompt execution.

Messrs. B., S. & Co. request the attention of their friends and the Trade, at home and abroad, to their having PURCHASED THE BUSINESS of Messrs. JAMES BASS & SONS, Hatton Garden, and with it the various Formulæ from which their Special Preparations have been made, and pledge themselves to supply them in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.



M. NEUSTADT & CO., 25 MINCING LANE, LONDON.

CHEMICALS

Used in PHARMACY and in PHOTOGRAPHY, of guaranteed purity, put up specially to suit the various Markets.

SOLE CONSIGNEES FOR

MERCK'S PURE SALICYLIC ACID
(ENGLISH PATENT)

AND MORPHIA ALKALOIDS;

**KOCH'S CHEMICALLY PURE SULPHATE
OF QUININE, P.B.,**

In Tins & in Bottles, and the

**"CROSSED SWORDS" ALBUMENIZED PAPERS USED IN
PHOTOGRAPHY.**

WHOLESALE ONLY.

TOWLE'S CHLORODYNE

The Original Preparation, as approved by the Medical Profession on account of its known composition and uniform strength.

Retail at 13½d., 2s. 9d., and 4s. 6d. Dispensing, 4 ozs., 4s. 6d., and 10 ozs., 11s., stamped.

LIQ. CHLORODYNII,

As originally introduced by A. P. Towle, and free from stamp duty for dispensing.

4 ozs., 4s.; ½ lb., 5s. 6d.; 1 lb., 10s.

TOWLE'S CHLORODYNE LOZENGES AND JUJUBES

In 1, 2, and 4 lb. Bottles, at 3s. per lb., and 6d. and 1s. Boxes. Foiled, Lined and neatly got up for the counter, 4s. 6d. and 9s. per doz

**A. P. TOWLE, Chlorodyne Manufacturer,
75 BACK PICCADILLY, MANCHESTER.**

Bills with name on application with instructions for forwarding.

SCHERING'S PURE CHEMICALS.

ACID GALLIC, TANNIC, PYROGALLIC.
GLYCERINE, extra re-distilled, 1260.

B.P. and Inodorous White and Pale, free from Lime.

SALICYLIC ACID AND SALTS. POTASS BROMIDE AND IODIDE.

Purest, indifferent to Barytim Salts.

PHOTOGRAPHIC PURE CHEMICALS.

See Pamphlet, "WHAT IS PHOTOGRAPHIC PURITY?"

All Preparations Manufactured and Warranted by the

Chemische Fabrik auf Actien, vormals E. SCHERING," Berlin,
Represented in the United Kingdom and the Colonies by

A. & M. ZIMMERMANN, 21 MINCING LANE, LONDON, E.C.,

Agents for Tinctures, Spirits, and Ethers in bond, and Essential Oils and Drugs generally.

SILVER MEDAL, PARIS 1878.

PURE COD LIVER OIL

In 25-Gallon
CASKS,

A. & H.

In Half-Gallon
WINCHESTERS,

8/3 per Gallon.



8/6 per Gallon.

MANUFACTURED BY ALLEN & HANBURYS.

The Medal of the British Section of the American Centennial Exhibition has been Awarded to A. & H. "for the excellent quality and purity of this Oil."

Every Package is either Sealed or Capsuled with the above Registered Trade Mark.

ALLEN & HANBURYS, Wholesale Druggists, Manufacturers of Pharmaceutical Preparations, &c.,
PLOUGH COURT, 37 LOMBARD STREET, LONDON, E.C.

General List of Drugs, Chemicals, &c., posted free on application.

ETHYLATE OF SODIUM.

(DR. RICHARDSON'S FORMULA.)

FOR DESTROYING NÆVI
and other Vascular Growths.

See LANCET, Nov. 9th, 1878.

In ½ oz. and 1 oz. Bottles, with elongated
Stoppers for applying the Caustic.

2s. 6d. and 4s.

DINNEFORD'S FLUID MAGNESIA.



PERFECT IN PURITY AND UNIFORM IN
STRENGTH.

Sold by all Wholesale Druggists, and by the Manufacturers,

DINNEFORD & CO.,
Pharmaceutical Chemists,
180 NEW BOND STREET, LONDON.

UNDER DISTINGUISHED PATRONAGE. (COPYRIGHT.)
HEALTH, STRENGTH, AND ENERGY.
DR. LALOR'S
PHOSPHODYNE.

Trade Mark—PHOSPHODYNE.

DISCOVERED AND SO NAMED, A.D. 1862, BY R. D. LALOR, M.D.

Pleasant to the Taste. The only Safe, Prompt, and Reliable PHOSPHORIC REMEDY for Overworked Brain, Worry, Anxiety, Excitement, Late Hours, Business Pressure, Nervous Prostration, Wasting Diseases, Asthmatic, Consumptive Stomach, and Liver Complaints, Impaired Nutrition, Impoverished Blood, Premature Decline, and all morbid conditions of the system, dependent upon the deficiency of Vital Force.

PHOSPHODYNE

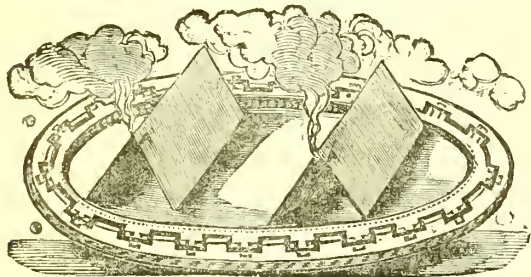
Purifies and Enriches the Blood; Clears the Skin; Thoroughly Invigorates the Brain, Nerves, and Muscles; Re-energises the Failing Functions of Life, and thus Imparts Energy and Fresh Vitality to the Exhausted Nervo-Electric Force; and Rapidly Cures every form of Nervous Debility, Paralysis, Nervous, Mind, and Heart Diseases, from whatever cause.

SOLD IN BOTTLES AT 4s. 6d. AND 11s.
BY ALL EXPORT, WHOLESALE, AND RETAIL MEDICINE VENDORS.

Pamphlet on Phosphoric Treatment, with Cures, post free, from
DR. ROBERT D. LALOR, BAY HOUSE, 32 GAISFORD STREET, LONDON, N.W.
(The SOLE PROPRIETOR and ORIGINATOR of PHOSPHODYNE).

BASE PIRACY.—Beware of a Counterfeit Imitation of Dr. LALOR'S PHOSPHODYNE at present being advertised in the Newspaper Press of India, China, and the Colonies. The Genuine PHOSPHODYNE bears the Christian, Surname, as above; also the Registered Trade Mark, to copy which is Felony. The name, DR. LALOR'S PHOSPHODYNE, is blown in the glass of each bottle, and is manufactured only at Dr. LALOR'S Laboratory, London, England. Medicine Vendors are hereby warned that Legal Proceedings will be taken against all persons selling the Fraudulent Imitation after this Notice.

Foreign Agents for Dr. Lalor's Phosphodyne:—TREACHER & Co., Bombay, Byeulla, and Poona; SMITH, STANISTREET & Co., Calcutta; R. ROBERTSON, Ceylon; J. LLEWELLYN & Co., Shanghai; HEYNES, MATHEW & Co., Cape Town; HEMMONS, LAWS & Co., Melbourne.



OZONE PAPER,

FOR THE IMMEDIATE RELIEF AND SUBSEQUENT CURE OF

ASTHMA, BRONCHITIS, AND BRONCHITIC ASTHMA.

DIRECTIONS.—Fold and place one or two pieces of paper on a dish, and light the top at point A. A dense fume will then arise and gradually fill the room; and after inhaling it for a few minutes the air-tubes will be cleared of mucus, difficult respiration will cease, and the patient will fall into a sound and refreshing sleep. The outer air must be excluded by keeping the windows, doors, and chimney closed. The paper may be burnt in the day as well as at night if necessary.—Price 2s. 9d., 4s. 6d., and 11s. per box.

OZONE CIGARETTES.

DIRECTIONS FOR USE.—A Cigarette may be lighted at either end, and a large volume of smoke should be drawn into the mouth, then a full inspiration taken to convey it into the air-tubes, when instant relief will be afforded.—Price 2s. 6d. per box. This remedy is advertised in the *Lancet* and *British Medical Journal*; it is therefore known to members of the Medical Profession, by whom it is recommended.

Prepared by R. HUGGINS, Chemist, 199 STRAND, LONDON.

GREAT IMPROVEMENTS IN RESPIRATORS.

BY ROYAL LETTERS PATENT.

CHISLETT'S PSEUDORA RESPIRATOR & INHALER.

Highly approved of by the Medical Profession. To be worn inside the month, therefore invisible, and has the appearance of a neat set of Teeth; invaluable as a preventative against catching cold, &c., and also curative in cases of Bronchitis and Phthisis.

Inventor and Patentee—**J. R. CHISLETT,**
35 UNION STREET, PLYMOUTH, DEVON.

Can be had through any Chemist. Wholesale Agents—Messrs. MAW, SON & THOMPSON, LONDON.

Fox's "Palatable" Cod Liver Oil

FOX'S "PALATABLE" COD LIVER OIL WITH QUININE.
FOX'S "PALATABLE" CASTOR OIL.

Chemists, Storekeepers, Shippers, and others who have not hitherto dealt in these Oils, would do well to order a trial assortment, as they invariably give the greatest satisfaction when once used. No other Proprietary Medicines are so largely recommended by, or have received so many commendations from, Physicians as these—see circulars, which may be had from all Wholesale Houses. They are specially prepared for shipment, and will stand any climate.

FOX'S "PALATABLE" COD LIVER OIL, 1s., 2s., 3s. 9d.; with QUININE, 2s. 6d., 4s. 9d. FOX'S "PALATABLE" CASTOR OIL, 6d., 1s.

GEORGE W. FOX & CO., CITY ROAD, MANCHESTER, and through all Wholesale Firms. Very Liberal Discounts to Shippers.

WHAT IS TRUTH?

Truth is a solid fact, more solid than the granite rock: it is the richest coin of the purest metal, free from alloy of any description. The shaft of envy will not face it, neither will the shots of prejudice enter it. It is surrounded on all sides by a thousand foes, but each and all, without exception, are mute beneath its piercing glance.

It is a Fact, as solid as the above, that

BEECHAM'S PILLS,

Which have been before the public for Thirty Years, have now become one of the leading Patent Medicines at the present day. From north to south, and from east to west, they are to be found in the homes of both the rich and the poor. All classes of Society use them, and they are by thousands declared to be

WORTH A GUINEA A BOX.

For a Weak Stomach, Impaired Digestion, and all Disorders of the Liver, they act like "MAGIC," and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long-lost complexion, bring back the keen edge of appetite, and arouse into action, with the ROSE-BUD of health, the whole physical energy of the human frame. These are "FACTS" admitted by thousands, embracing all classes of Society, and one of the best guarantees to the Nervous and Debilitated is, BEECHAM'S PILLS have the LARGEST SALE of any Patent Medicine in England.

All Patent Medicine Dealers abroad will find BEECHAM'S PILLS one of the most profitable and one of the best selling articles in the Market. The demand for them is regular, and all Foreign Houses who are desirous of getting a First-class Patent Medicine are respectfully requested to get BEECHAM'S PILLS from the leading Wholesale Houses in England (as no business will be done with any Foreign House by the Proprietor direct).

CAUTION.—The Public are requested to notice that the words "BEECHAM'S PILLS, ST. HELENS," are on the Government stamp affixed to each Box of the Pills; if not on, they are a Forgery.

Prepared only, and Sold Wholesale and Retail, by the Proprietor,

THOMAS BEECHAM,
ST. HELENS, LANCASHIRE, ENGLAND.

In Boxes, 1s. 1½d. and 2s. 9d. each.

N.B.—FULL DIRECTIONS ARE GIVEN WITH EACH BOX.

"FOR THE BLOOD IS THE LIFE."

CLARKE'S WORLD FAMED BLOOD MIXTURE,

The Great BLOOD PURIFIER and RESTORER.

(Registered Trade Mark—"BLOOD MIXTURE.")

The Celebrated CURE FOR Scrofula, Scurvy, Blood and Skin Diseases, and Sores of all kinds.

Wholesale of all the Wholesale Houses, at 24s. and 108s. per dozen, less the usual discount.

SOLE PROPRIETOR, F. J. CLARKE, CHEMIST, LINCOLN, ENGLAND.

Counter Bills and Posters, with Name and Address, also Show Cards, on application. Printed matter supplied in any Language for Foreign Agents.

CAUTION.—Mr. CLARKE will take immediate proceedings against all persons pirating his Trade Mark, "Blood Mixture," Labels, Wrappers, Bills, or Advertisements, or in any way infringing his rights.

EVANS'S EXTRACT OF MALT.

PROFESSOR ATTFIELD, Ph. D., F.C.S. (Professor of Chemistry to the Pharmaceutical Society of Great Britain, Nov. 1872), writes:—"Evans's Extract is incomparably more valuable than any preparation of malt hitherto offered to the Public."

PROFESSOR TICHBORNE writes:—"Other preparations of this class which I have examined, on evaporation yielded only 36 grains of extractive to the fluid ounce, whilst yours contains 101 ½ grains."

Dr. APJOHN writes:—"Of these constituents the most remarkable are those which include Nitrogen, the amount of which is unusually large—reaching, as it does, nearly 5 per cent. The Proteic compounds in an ounce of it weigh 22 32 grains, and the analogous compounds in an ounce of beef-steak 98.43 grains. Hence, weight for weight, the alimentary value of the Extract is very nearly one-quarter that of the beef-steak. It is therefore, nutritious to a high degree, and, being no doubt easy of assimilation, it must constitute a useful supplementary food in cases of debility and weak digestion."

EVANS'S SOLID EXTRACT OF MALT is also prepared with the following combinations:—

Malt with Quinine and Iron, Pepsine, Parrishes' Chemical Food, Hypophosphites, Cod Liver Oil.

EXTRACT OF MALT—"EVANS'S" possesses the power of producing a perfect emulsion with Cod Liver Oil, and in this state the taste of the Cod Liver Oil is more perfectly concealed than can be accomplished by any other known process.

PREPARED ONLY BY

JOHN EVANS,

Chemist to H.R.H. the Prince of Wales, H.R.H. the Duke of Connaught, and His Grace the Duke of Marlborough, K.G.,

49 DAWSON STREET, DUBLIN, & QUINSBOROUGH ROAD, BRAY, IRELAND.

IMPORTANT TO MOTHERS AND NURSES.

NUTTALL'S

CHILDREN'S COOLING, SOOTHING, AND TEETHING POWDERS



Greatly facilitate the process of teething by softening the gums, reducing all inflammation, prevent convulsions, and effectually cure fevers, sickness, wind, looseness of the bowels, acidity in the stomach, and all disorders incident to children; thus proving them to be "a comfort to mothers and a blessing to children."

This excellent medicine is guaranteed to contain no morphia, powerful narcotic, nor any other deleterious ingredient, and is thereby constituted the safest as well as the most effective medicine for young children.

In Boxes, at 1s. 1½d. and 2s. 9d. A great saving in the 2s. 9d. Boxes. Sold by all Chemists.

SIR ASTLEY COOPER'S ANTIBILIOUS PILLS.

These Pills have for long years been a favourite remedy for Bilious and other disorders arising from obstructions of the Liver and disarrangements of the Digestive Functions. They are much prized by residents abroad, especially in Italy, the Cape, and the Colonies. Prepared only by G. MARSHALL, M.P.S., Accrington, who has been Sole Proprietor for the last 18 years.

Boxes, 1s 1'd., 2s. 9d., and 4s. 6d. Be sure to order Cooper's ANTIBILIOUS Pills.

ROBINSON'S MEDICATED COTTON WOOL.

Purchasers of this valuable article should see that they get the genuine, which bears on the label facsimiles of M. ROBINSON and of the Sole Proprietor,

G. MARSHALL, Accrington.

SOLD IN PACKETS ONLY, 1s. 1½d., 2s. 3d., and 4s. 6d. TO BE HAD OF ALL THE WHOLESALE HOUSES.

Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the Inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—

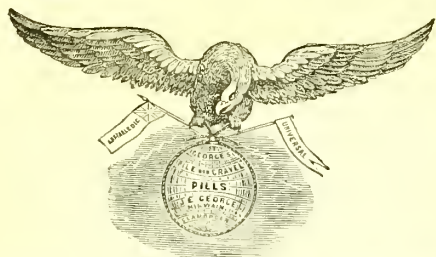
| | | | | | |
|---------------------------------|----------|----------------------------|----------------|-----------------------------|-------------|
| Apothecaries' Hall, | London. | Gale & Co., | London. | Newbery & Sons, | London. |
| Allen, Hanbury & Co., | " | Giles & Son, | Clifton. | Oldham, G. & Co., | Dublin. |
| Baiss Brothers, | " | Goulding, Messrs. | Cork. | Parsons & Richardson, | Leicester. |
| Banks & Richards, Birmingham. | | Gratton & Co., | Belfast. | Peake, Allen & Co., | Dublin. |
| Barron, Harvey & Co., London. | | Grimwade, Ridley, | London. | Raimes & Co., | Liverpool. |
| Bell, John, & Co., | " | Grindley & Son, | Chester. | Raimes & Co., | York. |
| Corbyn & Co., | " | Hearon, Squire & Francis, | London. | Raimes, Blanshards & Co., | Edinburgh. |
| Cox & Gould, | " | Hodgkinson, Tonge & Stead, | " | Sang & Barker, | " |
| Curling & Co., | " | Hopkins & Williams | " | Sanger, J., & Sons, | London. |
| Curtis & Co., | " | Hunt & Co., | Exeter. | Sim, James, & Co., | Aberdeen. |
| Davy, M'Murdo & Co., | " | Hunt, A., & Co., | " | Smeeton, W., | Leeds. |
| Drew, Barron & Co., | " | Johnson, J. H. & S., | Liverpool. | Southall & Co., | Birmingham. |
| Drew, B., & Alexander, | " | Langton, W., & Co., | London. | Sutton, W., & Co. | London. |
| Dunn & Company, | " | Lynch & Co., | " | Tomlinson, Hayward & Co., | Lincoln. |
| Edwards, W., | " | Mander, Weaver, | Wolverhampton. | Treacher, Hodgkinson & Co., | " |
| Evans, Gadd & Co., | Exeter. | Marsden & Sons, | London. | Westrup, J. B., | Kensington. |
| Evans, Lescher & Evans, London. | | Maw & Son, | " | Westwood & Hopkins, | Lincoln. |
| Ferris & Co., | Bristol. | Meggeson & Co. | " | Woolley, James, | Manchester. |
| Foulger, S., & Son, | London. | Mackay, John, | Edinburgh. | Wyleys & Brown, | Coventry. |
| Frazer & Green, | Glasgow. | Morson, T., & Son, | London. | Yates & Co., | London. |

After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

Sold in Bottles—1s. 1½d., 2s. 9d., 4s. 6d., and 11s. Usual Discount to the Profession.

SOLE MANUFACTURER,

J. T. DAVENPORT, Pharmaceutist,
33 GREAT RUSSELL STREET, BLOOMSBURY SQUARE, LONDON.



GEORGE'S PILE & GRAVEL PILLS.

A Safe, Certain, and Speedy Cure for PILE and GRAVEL. This Remedy may be had in the following forms:

NO. 1. GEORGE'S PILE AND GRAVEL PILLS.

NO. 2. GEORGE'S GRAVEL PILLS

NO. 3. GEORGE'S PILLS FOR THE PILES.

In Boxes, 1s. 1½d. and 2s. 9d. each. Wholesale from all the Patent Medicine Houses and Wholesale Druggists. Notice, the Title "PILE & GRAVEL PILLS," is Copyright.

IMPORTANT TO THE FAIR SEX.

The Ladies' Own Certain Restorer.

MRS. WILSON'S FEMALE PILLS.

Price 1s. 1½d., 2s. 9d., 4s. 6d. per Box.

A SURE REMEDY FOR ALL FEMININE AILMENTS.

They have a large and increasing sale, and wherever introduced are eagerly sought after and always recommended.

AGENTS WANTED. HANDBILLS SUPPLIED.

Apply to the Wholesale Dealers, or at the Manufactory,

60 BLACKWELL STREET, KIDDERMINSTER.

THE DIAMOND SOLUBLE CAPSULE CO., LONDON AND GLASGOW,

Manufacture Capsules containing all Nauseous Drugs.

The Trade supplied with samples and terms on application to the Company,

305 NEW CITY ROAD,
GLASGOW.

ROBINSON & SONS,

SPINNERS AND MANUFACTURERS OF

SURGEONS' LINTS, COTTON WOOLS,
AND ROLL BANDAGES,
WHEAT BRIDGE MILLS, NEAR CHESTERFIELD;
55 FANN ST., ALDERSGATE ST., LONDON, E.C.



TRADE MARK.

SAMPLES OF ALL OUR GOODS
FORWARDED ON APPLICATION.

LINT.

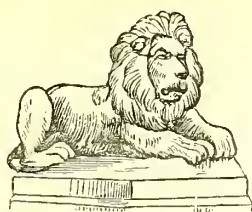
R. & SONS respectfully call attention to their No. 1 FLAX LINT, made from PURE LINE Yarn, making a beautifully soft, fine Lint. Their No. 3, 0, and 00 COTTON LINTS are used in the largest Hospitals of the United Kingdom. No. 0 SURGEON'S LINT is a medium quality, and well adapted for Export. No. 1 SURGEON'S LINT is a beautiful Lint for private practice, and always gives satisfaction.

Our LINTS TEAR EASILY, but Nos. 00, 0, and 1 Surgeons' more readily across the Fabric.

PARIS EXHIBITION, 1878.

The "LANCET," August 24, 1878, says:—

"Messrs. ROBINSON & SONS, of New Brampton, near Chesterfield, have exhibited some beautiful specimens of Lint, which attract the attention of French and foreign surgeons. They look very soft and silky. Their flax and cotton samples are equally good. These exhibitors especially draw the attention of French medical men (who employ the thready French lint) to their cheap cotton lint, which is employed in the majority of English hospitals, and which is cheap and easy to apply. They lay great stress on the care they take to rid the lint of chlorine, acids, or other irritating substances. They have also a collection of bandages very remarkable for their flexibility and facility of application. They look comfortable to wear, and ventilation must take place better with them than through a more closely-woven tissue."



TRADE MARK.



PATENT LINT,

FLAX, UNION, AND COTTON.

SAMUEL SHAW BROWN & CO.

Respectfully apprise the Wholesale Trade they are solicitous for their commands to supply each and every kind of Lint specially required for the various and essentially different therapeutic purposes. While the cheap or the truly high class, as demanded by different branches of commerce, may be promptly obtained from them on such terms as will keep the Trade legitimately in the hands of the Manufacturer and Wholesale Merchant.

THEIR SPECIALITY for delicate purposes and superior use is introduced as extra superfine Cambric Lint, measuring about 11 yards by 6 inches each pound. This cannot be approached by any other maker or by any mode of manufacture except their patented process for extent of surface, fineness of fabric, uniformity, porosity, whiteness, purity, or absorbent power.

Their higher qualities of flax have the same special excellence, with the additional coolness and oily softness only attainable from flax fibre.

Their No. 1 is for Hospital and ordinary trade purposes, and will be highly approved, being pure, exceedingly white, soft, absorbent, and unusually cheap.

Each of these qualities can be had in neat and unique 1, 2, and 4 ounce packages.

Samples, Price, Terms, &c., at the Company's Works only.

LINT MILLS,

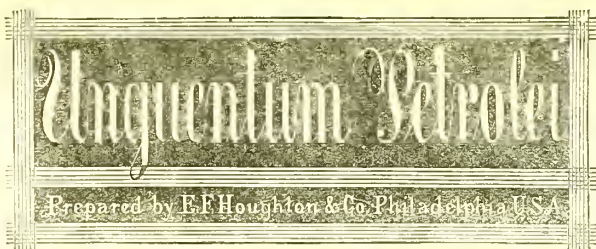
JOHN STREET, NETHERFIELD ROAD,
LIVERPOOL.

REGISTERED

NAME

AND

LABEL.



PRICES:

In 100-lb. Tins,
1/9 per lb. bulk.
In 5-lb. or 10-lb. Tins,
1/10 per lb.
In 1-lb. Tins, 2/ per lb.
PACKAGES INCLUDED.
In bulk (packages extra),
1/9 per lb.

ALLEN & HANBURYS,

WHOLESALE DRUGGISTS,

PLOUGH COURT, 37 LOMBARD STREET, LONDON, E.C.

N.B.—For General List of Drugs and Chemicals, see Price Current, posted free on application.

DR. H. A. MARTIN'S**PURE RUBBER BANDAGES (GENUINE)**

For Ulcers and other Diseases of the Legs, and certain Diseases and Injuries, and Result of Disease and Injury of Joints.

See BRITISH MEDICAL JOURNAL, October 26th, 1878; December 14th, 1878; LANCET, October 12th, 1878.

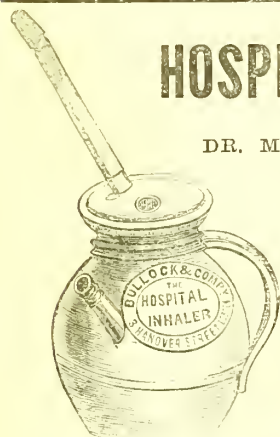
| | | | | | | |
|----------------------------|-----|-----|----------------------------|-----|------|------------------------------|
| 7½ ft. long by 3½ in. wide | ... | 8/- | 15 ft. long by 3½ in. wide | ... | 16/- | } Subject to Trade Discount. |
| 10½ ft. " 3 in. " | ... | 8/- | 22 ft. " 3½ in. " | ... | 22/6 | |

N.B.—BEWARE OF WORTHLESS IMITATIONS.

See "SURGICAL USES OTHER THAN HEMOSTATIC OF THE STRONG ELASTIC BANDAGE," by H. A. MARTIN, M.D. Boston.
Post free, 7d.

Each Bandage bears the signature of Dr. H. A. MARTIN, without which none is genuine.

**KROHNE & SESEMANN, 8 Duke Street, Manchester Square, W., and
241 Whitechapel Road, E., SOLE AGENTS.**

**THE HOSPITAL INHALER**

AS RECOMMENDED BY

DR. MORELL MACKENZIE.**RETAIL PRICES.**

Inhaler, with Thermometer and
Nostril Dilator,
7s. 6d.

The same in Case, fitted with
divisions for Bottles of Inha-
lation and Lozenges,
12s. 6d.

**J. L. BULLOCK & CO.,
3 HANOVER STREET,
HANOVER SQUARE, LONDON, W.**

PEPSINA PORCI.**Messrs. J. LLOYD BULLOCK & CO.**

Beg to direct the attention of the Profession to the Experiments upon "Medicinal Pepsine" by Professor Tuson, recorded in the *Lancet*, August 13th, 1870, which incontestably prove the very great superiority of their Preparation in point of digestive power over every other Pepsin, British or foreign, a pre-eminence maintained to the present time. Dose—two to four grains.

A copy of Professor Tuson's Paper will be forwarded on application.

3 Hanover Street, Hanover Square, London, W.

ASTHMA and other Maladies of the Respiratory ORGANS. — SLADE'S ANTI-ASTHMATIC CIGARETTES are carefully prepared from Soothing and Antispasmodic Medicinal Plants, camphorated and aromatised. Being safe, efficient, and agreeable, they can be used by the most delicate Invalid Ladies. Are prescribed at the Brompton and Victoria Park Hospitals, and by many eminent Physicians in the United Kingdom, the Colonies, and on the Continent. In sealed bottles only, whereby their virtues remain unimpaired by time or climate. Price 2/9, 4/6, and 11/. Liberal terms to Wholesale and Export. Samples free. "Relief from the urgent symptoms of a paroxysmal attack may often be obtained by these cigarettes."—*Lancet*, Jan. 8th, 1875. Prepared only by the Inventor and Proprietor, **THOMAS SLADE, PHARMACIAN, 118 LONG ACRE, LONDON.**

ARAROA

10s. 6d. per lb.

CAROBA (Jacoranda Procera), 2s. per lb.

CARNAUBA ROOT, 1s. 6d. per lb.

IMPORTED BY

SYMES & CO., LIVERPOOL,

Manufacturers of Lac Bismuthi, &c.

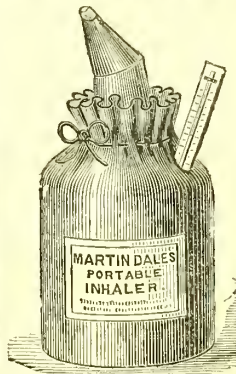
MARTINDALE'S PORTABLE INHALER**FOR INHALING MEDICATED
MOIST AIR.**

The body of the apparatus is made of tin. It has an earthenware mouthpiece and a woollen cover. It packs safely in a parcel, 7 in. by 5 in. by 5 in.

Price, Retail, including Thermo-
meter, 6s. 6d. each.

Wholesale Agents—MAW, SEX & THOMP-
SON, and ARNOLD & SONS, London;
SALT & SON, Birmingham.

**WILLIAM MARTINDALE,
101 NEW CAVENDISH STREET, LONDON, W**



LINDSEY & SONS,

EXPORT

TRUSS & BANDAGE MANUFACTURERS,

32 LUDGATE HILL,

AND

10 GRACECHURCH STREET, LONDON, E.C.

NETT PRICES.—1879.

| | Per dozen. | | Per dozen. |
|---|---------------|--|---------------|
| COMMON PRINCIPLE TRUSSES, Basil and Chamois | £9 16 0 | SALMON & ODY'S EXPIRED PATENT, <i>Single</i> , White or Red Roan .. | £1 7 0 |
| Ditto Mole Lined | 18/ and 1 0 0 | Ditto Calf and Silk sewn | 1 10 0 |
| Ditto White or Red Roan | 1 4 0 | Ditto <i>Double</i> , Basil and Chamois £22s. and .. | 2 8 0 |
| Ditto Calf Covered, Silk Sewn | 1 10 0 | Ditto " White or Red Roan | 2 14 0 |
| TUBULAR TRUSSES, COMMON PRINCIPLE, covered Basil and Chamois .. | 1 4 0 | Ditto " Calf, Silk sewn | 3 0 0 |
| Ditto Mole Lined | 1 6 0 | VERY NARROW, SALMON & ODY'S PRINCIPLE, as "Wickham's," a .. | 2 14 0 |
| Ditto White or Red Roan | 1 10 0 | Ditto <i>Superior Truss, Single</i> | 5 8 0 |
| Ditto Calf and Silk sewn | 1 15 0 | Ditto <i>Double</i> | 48/ and 6 0 0 |
| SINGLE CIRCULAR, VERY LIGHT AND NARROW SPRING, imper-ceptible— | | COLE'S EXPIRED PATENT TRUSSES, <i>Single</i> , covered best Doeskin .. | 6 0 0 |
| Plain, <i>Single</i> | 1 12 0 | Ditto <i>Double</i> , covered best Doeskin 96/ and .. | 7 4 0 |
| Best Covered, <i>Single</i> | 2 5 0 | MOC-MAIN TRUSSES, Plain, Stuffed real Moc-Main— | |
| Plain, <i>Double</i> | 2 2 0 | as White's, £3 12s. Double .. | 10 16 0 |
| Best Covered, <i>Double</i> | 2 16 0 | Ditto Sunk Springs, ditto— | |
| SALMON & ODY'S EXPIRED PATENT, <i>Single</i> , Basil and Chamois .. | 1 4 6 | as White's, £5 8s. Double .. | |

LINDSEY & SONS' Trusses have long maintained a high reputation for quality, and they will be happy to send their full descriptive price list on receipt of address, post free.

Customers are requested to order specially LINDSEY & SONS' TRUSSES, either direct or through any Wholesale House.



THE ANGLESEY ARTIFICIAL LEG.

The ONLY MEDAL Awarded at the VIENNA EXHIBITION, 1873.

Second Edition, price 7s. 6d.



AUTOMATIC MECHANISM,

AS APPLIED IN THE CONSTRUCTION OF

ARTIFICIAL LIMBS,

WITH 100 ILLUSTRATIVE CASES.

By Mr. GRAY, Sole Operator to the late Field-Marshal the Marquis of Anglesey, K.G., and Sir Thomas St. Vincent Trowbridge, Bart. Dedicated, by special permission, to Sir B. C. Brodie, Bart.
H. RENSHAW, 356 STRAND.

Mr. GRAY's extensive practice in the making of Artificial Limbs has long enabled him to adopt this art as his spécialité, and his success is acknowledged to stand unrivalled.

PHILIP GRAY,

ARTIFICIAL LIMB MAKER,

7 Cork Street, Burlington Gardens, London, W.



GABRIEL & TROKE,

WHOLESALE AND EXPORT DRUGGISTS AND MANUFACTURING CHEMISTS,
82 CITY ROAD, LONDON, E.C.

Genuine Crushed Linseed, 22s. per cwt., nett cash.

Glycerine, Redistilled and Chemically Pure, S.G. 1.260, by the case of 4 tins of 56 lbs. each, 70s. per cwt.; 6 W. Qts., 8d. per lb.; 5 per cent.

Finest Norwegian Cod Liver Oil, 7s. 6d. per gallon; 7s. 3d. for 10 gallons; 7s. for cask of 25 gallons; 5 per cent.

Lotio Antiseptica, an Alcoholic Solution of Coal Tar, 2s. 3d. per lb.

Liquor Pepsinæ (special), 5s. per lb.

Soluble Essences of Ginger, Lemon, and Orange.

PRICE LISTS FORWARDED ON APPLICATION.

KILNER BROTHERS, GLASS BOTTLE MANUFACTURERS,

THORNHILL LEES, NEAR DEWSBURY, AND CONISBORO', NEAR ROTHERHAM,
YORKSHIRE.

LONDON OFFICES AND WAREHOUSES:

No. 3 GT. NORTHERN GOODS STATION, KING'S CROSS, N.

PRIZE MEDALS: LONDON, 1862; PARIS, 1875 & 1878; PHILADELPHIA, 1876.

We supply Mineral Water Bottles for most of the Patent Stoppers now in use, and are sending them out *fitted complete*.

BOTTLES! BOTTLES! BOTTLES!

THE ST. CLEMENT'S GLASS CO. (LIMITED),
MEDICAL BOTTLE MANUFACTURERS,

Will send their List of Prices on application.

Shippers, Wholesale Houses, and Bottlers of Proprietary Articles should apply at once if they are in search of a first-class article at a low price.

Manufactory and Chief Offices—

CLEMENTHORPE, YORK.

BAGLEY, WILD & CO.,
GLASS BOTTLE MANUFACTURERS,
Works—KNOTTINGLEY, YORKSHIRE.

LONDON OFFICES AND WAREHOUSES:

Nos. 18 to 21 GREAT NORTHERN GOODS STATION, KING'S CROSS, N.

| | | | | | |
|---|-----|-----|-----|-----|--------|
| 3 and 4 oz. Very good quality Medicals, any shape | ... | ... | ... | 8/6 | } Net. |
| 6 and 8 oz. " " " " " " | ... | ... | ... | 9/6 | |

SHIPPERS OF LARGE QUANTITIES LIBERALLY TREATED WITH.

Prize Medal, Paris Exhibition, 1878, for Excellence of Quality.

TESTIMONIALS FROM ALL PARTS.

GLASS BOTTLES. GLASS MEASURES, &c.

REDUCTION.

REDUCTION.

ROUND SHOULDER OR LIME JUICE BOTTLES.

$\frac{1}{2}$ 1 1 $\frac{1}{2}$ 2 3 4 6 8 10 12 16 20 oz.

3/6 4/- 4/6 5/6 6/6 7/6 9/6 11/6 14/- 16/- 19/- 21/- grs.

BEST KALI OR CONFECTIONERS' BOTTLES.

4 6 8 10 12 20 oz.

8/- 10/- 12/- 15/- 18/- 24/- gross.

BEST STOPPERED BOTTLES (all kinds), $\frac{1}{2}$ oz. to

20 oz., 15s. to 60s. gross.

BEST QUALITY GREEN FLINT DISPENSING BOTTLES, Vial Lips, Flat or Oval, 3-oz. & 4-oz., 8s.;

6-oz. & 8-oz., 8s. 6d.; 10-oz. & 12-oz., 14s. per gross.

GASOGENES, first-class article, 3-pint, 12s. 6d.;

and 5-pint, 15s.

GLASS SYRINGES, BEST QUALITY $\frac{1}{4}$ 1 2 oz.

All and every kind of Bottle made.

N.B.—All goods are sold in bulk.

GLASS MEASURES, accurately marked,

punctured bottoms.

1 2 4 6 8 10 12 16 20 40 oz.

4/6 5/6 8/- 9/6 11/- 13/- 14/6 16/- 18/- 24/- doz.

FEEDING BOTTLES. (If in large quantities.)

Best Green Glass, one dozen in a box, 23s. grs.

Best White 30s. "

1s. Feeding Bottle, one in a box, with brush,

&c., complete, 50s. gross.

GASOGENES, first-class article, 3-pint, 12s. 6d.;

and 5-pint, 15s.

GLASS SYRINGES, BEST QUALITY $\frac{1}{4}$ 1 2 oz.

Special prices given for any particular pattern.

Special quotations to large buyers.

JONAS & JULES LANG, GLASS WORKS, ALSACE & LORRAINE.

Showrooms—13 Charterhouse Buildings, Aldersgate Street, London, E.C., and 28 Rue Notre Dame de Nazareth, Paris.

ESTABLISHED 1851.
CHEMISTS' SHOP FITTERS,
SHOW CASE MAKERS & SHOP FRONT BUILDERS.

JOHN CURTIS & SON,
NORTH OF ENGLAND STEAM SHOP FITTING WORKS,
WADE STREET AND WADE LANE, LEEDS.

Designs and Estimates furnished.

EXPERIENCED FITTERS SENT TO ALL PARTS. DESIGN SHEETS FORWARDED ON APPLICATION

NEWLY ESTABLISHED DEPOT OF ED. LOEFLUND'S EXTRACTS OF MALT

The sale of these Preparations having lately increased in this country, Mr. ED. LOEFLUND, of Stuttgart, has now established a branch business at 11 Jewin Crescent, Aldersgate Street, London, E.C., from which the following combinations, sold in 10-oz. bottles, can be obtained:—

LOEFLUND'S EXTRACT of MALT,

Pure and concentrated, 2s. 4d. per bottle.

**LOEFLUND'S EXTRACT of MALT with
PYROPHOSPHATE of IRON,**

contains 2 per cent. of the Pyrophosphate, 2s. 6d. per bottle.

**LOEFLUND'S EXTRACT of MALT with
HYPOPHOSPHITE of LIME,**

contains 2 per cent. of the Hypophosphite, 2s. 6d. per bottle.

**LOEFLUND'S EXTRACT of MALT with
COD LIVER OIL,**

an Emulsion consisting of equal parts of Extract of Malt and best Norwegian Cod Liver Oil, 2s. 4d. per bottle.

The above may be ordered through all the Wholesale Houses, less usual Trade Discount, or of

ED. LOEFLUND,

11 JEWIN CRESCENT, ALDERSGATE STREET,
LONDON, E.C.

HANDSOME CHEMIST'S SHOP FITTED COMPLETE

INCLUDING GLASS SHOW CASES,

GOLD-LABELLED SHOP BOTTLES, JARS, &c.,

For £75.

LISTS ON APPLICATION

An Experienced Gold Label Writer, Specie Jar Painter, Embosser, &c., engaged on the premises, and sent to all parts of the Kingdom. Every description of ornamental writing done, &c., cheaper than any other house.

LLOYD RAYNER,

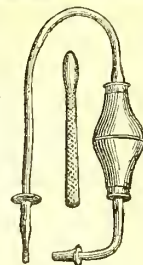
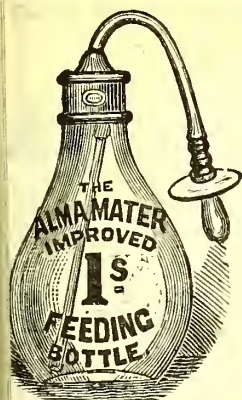
MEDICAL AND GENERAL SHOP FITTER,
SHOP FRONT BUILDER,
SHOW CASE MAKER, FIXTURE DEALER,
AND MEDICAL LABELLER.

SHOW ROOMS AND OFFICES:

333 Kingsland Road.

FACTORIES:

2 Downham Road, Kingsland, and Whitmore Road,
Hoxton, London, N.



**HIGGINSON'S
ENEMAS,**
In sliding Cedar
Boxes, with Gum
Elastic Vagina Pipe,
27s. per doz.,
for an order of six
dozen or upwards.

BEST WORK ONLY.]

[BEST WORK ONLY.

FILMER KIDSTON,

MEDICAL SHOP FITTER & SHOW CASE MAKER,

AND MANUFACTURER OF EVERY DESCRIPTION OF DRUGGISTS' FURNITURE.

NOTICE.

Chemists commencing Business, Fitting-up Shops, or making alterations to their premises, should first inspect KIDSTON's modern and unique style of manufacture, so much approved of by the Profession for its elegant appearance and superior finish.

Plans and Estimates supplied. Gentlemen are invited to inspect KIDSTON'S

PRIZE DISPENSING COUNTER,

Which can be seen at the Show Rooms,

DUKE STREET, BRUSHFIELD STREET, BISHOPSGATE, LONDON.

ILLUSTRATED LISTS OF SHOW CASES ON APPLICATION.

GERRARD & JOHNSON,

MEDICAL SHOP FITTERS

AND

SHOW CASE MAKERS,

22 CLOUDESLEY RD., ISLINGTON, N.

CHEMISTS' SHOPS FITTED ENTIRELY.

Estimates and Designs Supplied.



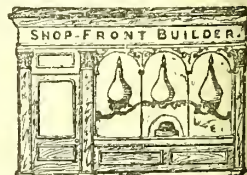
SHOP-FITTINGS.

ESTABLISHED 1830.

SAMUEL HOWLETT.

4 LINDLEY STREET (formerly called North St.), SYDNEY
STREET, MILE END, LONDON, E.

A few Minutes' Ride by Omnibus from the Bank.



MEDICAL AND GENERAL SHOP FITTER.

SHOPS FITTED BY S. H., and to whom references are kindly permitted:—

Messrs. Corbyn, Stacey & Co., 7 Poultry, London.

Mr. H. Deane, Clapham, London.

„ John Broad, Hornsey Rise, London.

„ N. Nicholson, Canonbury, London.

&c.

&c.

&c.

Messrs. Leath & Ross, St. Paul's Churchyard, London.

„ Harvey & Reynolds, Leeds.

Mr. W. F. Smith, 280 Watworth Road, S.E.

Mr. Thomas Hall, Lowestoft.

&c.

&c.

&c.

Cabinet Fitter to the Pharmaceutical Society of Great Britain. Manufacturer of every description of Air-tight Glass Show cases for Chemists, Jewellers, &c. Medical Labelling, &c.

Plans and Estimates for Entire Fittings and Alterations supplied.

R. TOMLINSON,

DRUGGISTS' SHOP-FITTER, SHOW-CASE MAKER,

AND

MANUFACTURER OF DRUGGISTS' SUNDRIES,

15 St. PAUL'S SQUARE, BIRMINGHAM.

VALUATIONS EFFECTED.

BUSINESS TRANSFER AGENT.

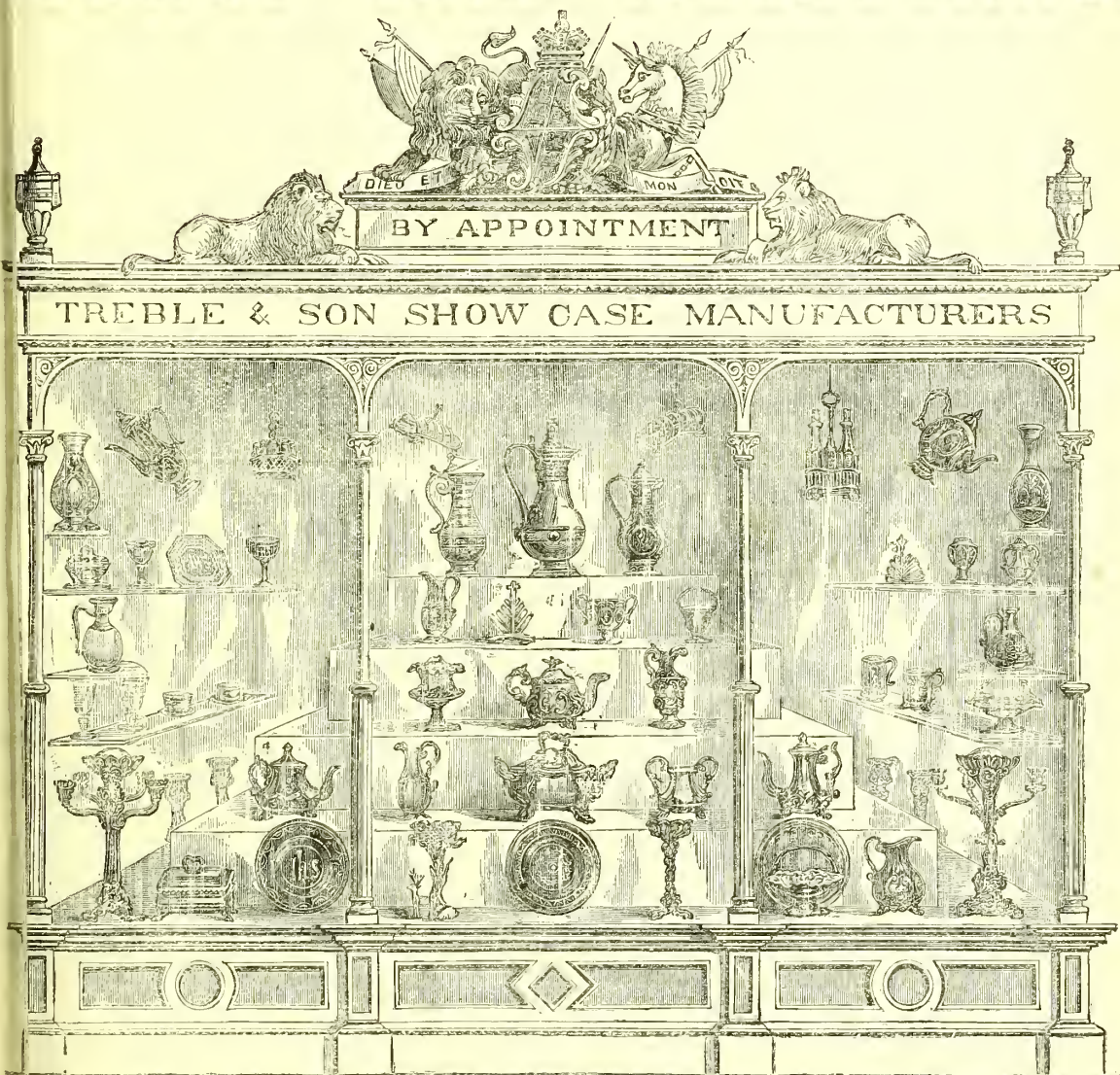
Second-hand Fixtures for Sale, Jars, Globes, Drawers, Bottles, Counter Glass Cases, Shelves, &c.

SECOND-HAND FIXTURES OF ALL KINDS BOUGHT AND EXCHANGED.

R. T. will wait upon parties fitting up, to plan and advise. 2nd-class fare only charged.

WRITE FOR LIST.

EXHIBITIONS SYDNEY AND MELBOURNE.



GEO. TREBLE & SON,
MANUFACTURERS OF SHOW CASES

Special Designs and Estimates Supplied.

SHOW CASES & SHOP FITTINGS BY CONTRACT.

Works:—40, 41, 42, 43, & 44 GLOUCESTER STREET, & MYRTLE STREET; 44, 46, 48, 50, & 52 WHITMORE ROAD;
and BRIDGE WHARF, REGENT'S CANAL, LONDON, N.

Office:—GLOUCESTER STREET, HOXTON, LONDON.

OZOKERIT.

PATENTED.

Grand Medal,
MOSCOW, 1872.



Grand Medal,
VIENNA, 1873.

MADE IN ALL SIZES.

At the CENTENNIAL PHILADELPHIA EXHIBITION the highest honours were awarded to

J. C. & J. FIELD

FOR THEIR EXHIBIT OF

C A N D L E S

PATENTEES & ORIGINAL MANUFACTURERS

OF

SELF-FITTING CANDLES.

Made in all Sizes. | Made in all Colours. | Burn to the End. | Require no Scraping.
Made in all Qualities. | Fit all Sockets. | Require no Cutting. | Are Safe, Economical, Cleanly.

CANDLES SPECIALLY ADAPTED FOR EXPORTATION TO HOT CLIMATES.

OZOKERIT (Patented). In handsome 1-lb. Packets.

These beautiful Candles are made in ALL SIZES, and from their great hardness and non-liability to bend when exposed to a high temperature, are well adapted for Ball Rooms and Tropical Climates. They possess the highest illuminating power of all descriptions of Candles.



Tablets 5 to 1b.

UNITED SERVICE SOAP,

Of highly emollient properties, and singular durability
of Perfume.



Tablets 3 to 1b.

TRANSPARENT GLYCERINE TABLETS, TRANSPARENT HONEY TABLETS, BROWN WINDSOR, and all FANCY TOILET SOAPS,

In Tablets, Squares, or Bars, and in all qualities.

EMOLLIENT "STOCKHOLM TAR SOAP,"

Very detergent, and a powerful disinfectant.

NIGHT LIGHTS, WAX MORTARS, DISH-WARMERS, LIGHTING-WICK BOUGIES, WAX and TRANSPARENT TAPERS, &c.

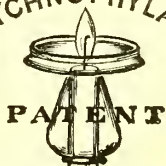
CARRIAGE CANDLES in Wax,

LYCHNOPHYLAX

OZOKERIT, & Stearine, all sizes.

PATENT CANDLE GUARDS.

These Glasses (made to fit 4's and 6's only) more effectually prevent the Guttering of Candles than any article ever introduced.



Specially adapted for Ball-rooms, Churches, &c.

PATENT SAVE-ALLS & CANDLE-CUTTERS for use with these.

Full particulars, with drawing, sent on application.

Wholesale Detailed Price Lists of

J. C. & J. FIELD, PATENT CANDLE WORKS, LAMBETH MARSH, LONDON, S.E.

SLABURY & JOHNSON, 11 Jewin Crescent, Aldersgate Street, E.C.



PRIZE MEDAL, BRUSSELS HYGIENIC
EXHIBITION, 1876.

GOLD MEDAL, SOUTH AFRICAN EXHIBITION, 1877.
PRIZE MEDAL, PARIS GRAND EXHIBITION, 1878.



RICHARDSON'S LIQ. SECALIS AMMON.

THE ORIGINAL PREPARATION. BEWARE OF IMITATIONS.

For twenty-five years we have prepared this valuable remedy, originally from the formula of a very eminent obstetric practitioner. From a long and careful study of the active principles of the Ergot, we have so varied the process of manipulation, and have now so perfected our mode of operation, that it has resulted in the *very best form* in which this valuable therapeutic agent can be administered.

It has been extensively prescribed by some of the leading obstetric surgeons in England, India, and the Colonies, and has been found to produce the most satisfactory effects. Safe and certain in its results, possessing all the virtues of the FRESH ERGOT, and preferable on account of its easy administration.

We select a few of the many Testimonials we have been favoured with, which we have pleasure in submitting for perusal.

SELECT MEDICAL OPINIONS.

From J. A. STEWART, Esq., M.D.

Orchard House, Pencatland, Feb. 16th, 1874.

I have tried your Liq. Secalis Ammon., and have pleasure in reporting most favourably of its action. It is speedy, sure, and reliable in its results, and is by far the safest and most pleasant, as also the most certain form of Ergot I have ever met with, and a most valuable remedy for those practitioners who have large Obstetric practices.

From D. G. ASTLEY, Esq., L.F.P.S.

Newcastle, Staffordshire, March 30th, 1874.

I have great pleasure in testifying to the efficacy of your Liq. Secalis Ammon. I have used it in an extensive Midwifery Practice for several years, and with the same satisfactory results. I know of no preparation of Ergot so RELIABLE.

From J. R. NUNN, Esq., M.R.C.S.

Warwick, June 17th, 1874.

For some time I have used your preparation, Liq. Secalis Ammon., and have always found it to answer admirably, and is so much more pleasant for a patient to take. This preparation I consider a great boon to the Obstetric Practitioner.

From W. JOHNSTON, Esq., M.D.

Clay Cross, Derbyshire, July 19th, 1874.

I have great pleasure in testifying to the efficacy of your Liq. Secalis Ammon. in all Obstetric cases where uterine action proves sluggish and insufficient, through debility of constitution. In my experience it TAKES PRECEDENCE OF ALL THE OTHER PREPARATIONS OF ERGOT in its rapidity of action upon, and power of augmenting, uterine contraction.

From W. WOODWARD, Esq., M.D., L.R.C.P. Lond.

Worcester, June 23rd, 1874.

Kindly send me another bottle of your Liq. Secalis Ammon. You may remember I hesitated to use it, having preferred the powder to all other preparations I had ever tried. However, after having used all you sent me, I can truly say it is a most valuable preparation, quite equal to the powder, and of course is a much less inconvenient form, to say nothing of the powder being often inert on account of want of care in keeping it.

From THOMAS WILTSHIRE, Esq., L.R.C.P.

Sheffield, May 27th, 1875.

I have used your Liq. Secal. Am. for the last two years, and find it to be a MOST RELIABLE PREPARATION.

From R. CLARK NEWTON, Esq., M.R.C.S.

Newcastle-on-Tyne, June 28th, 1875.

I consider your preparation of Ergot (Liq. Secalis Ammon.) THE BEST I have administered. It is quick and efficacious in its action, and I have seldom known it vomited.

From ALFRED HOOPER, Esq., M.R.C.S.

Newhall, Burton-on-Trent, Sept. 1st, 1875.

Your Liq. Secalis Ammon. is the best preparation of Ergot I have ever used. It is REMARKABLY CERTAIN, SAFE, AND QUICK in its results. I have tried various forms of liquid extract of Ergot, and began to despair of obtaining a thoroughly reliable one. Yours, however, has raised my drooping faith, and I have great pleasure in bearing my testimony in its favour.

From P. SCOTT, Esq., M.R.C.S.

Mansfield, Notts., August 30th, 1875.

Having had a large Obstetric practice for forty years, I can with pleasure speak most highly of your Liq. Secalis Ammon. AS THE MOST SAFE AND CERTAIN FORM OF ERGOT YET INTRODUCED, and can with confidence recommend it to practitioners.

From J. A. LYCETT, Esq., L.R.C.P. Lond.

Ablow House, Wolverhampton, July 12th, 1875.

As the administration of powdered Ergot is inconvenient, I, sometime ago, was induced to try your Ammoniated Solution, which I still use, finding it very efficacious, due presumably to the medicinal property being more soluble in the presence of an alkali. From my experience I can with pleasure recommend it as a very good preparation.

From T. F. HALE, Esq., M.R.C.S.

Staveley, Derbyshire, June 14th, 1875.

With reference to your Liq. Secalis Ammon., I have now used it several years in a very extensive Midwifery practice, and with UNFAILING results; I prefer it to any other preparation I have yet met with, and it is equally efficacious in all cases where Ergot is generally found useful.

From THOS. L. GENTLES, Esq., L.F.P.S.

Wellington House, Derby, October 9th, 1875.

It affords me much pleasure to testify that I have given Messrs. Richardson's preparation of Ergot a fair trial, and I find it THOROUGHLY EFFICIENT and RELIABLE.

From Drs. LAMB and KISSEN.

11 Charlotte Street, Hull, April 26th, 1876.

In an extensive Midwifery practice we have given your Liquor Secalis Ammon. a good trial, and find the preparation to answer more speedily and effectually than any other we have tried. In prolonged and tedious cases the stimulating effect is very marked, enabling nervous and timid patients to take fresh heart, and so mutually to assist the already enfeebled patient.

From E. B. EVANS, Esq., L.R.C.P., M.R.C.S., &c.

St. Thomas, Swansea, June 8th, 1877.

I am bound to say that no other preparation of Ergot that I have tried can be compared with yours for producing the effect desired by the administration of that drug. I have used it largely for the last few years in Obstetric practice, and have found it, *without exception*, speedy in its action, pleasant to the patient, and equally efficacious in producing uterine contractions both *ante-partum* and *post-partum*.

From C. E. MONRO, Esq., M.R.C.S. Eng., L.R.C.P. & L.M. Edin.

I cannot speak in too high terms of your Liquor Secalis Ammon. In a recent difficult case of *post-partum* hæmorrhage it acted marvellously, after the FAILURE OF OTHER ERGOT PREPARATIONS. It no doubt SAVED THE PATIENT. It is a VERY VALUABLE PREPARATION, and one which ought to be known and generally used.

From JOHN BLACKBURN, Esq., M.R.C.S., &c., Surg., Beckett Hospital.

Ivy House, Barstley, Feb. 2nd, 1876.

Will you send me the same quantity of Liq. Secalis Ammon. as I had before. I have always had a prejudice against this preparation, having used it several times without producing the desired effect; but after using that of yours, I feel bound to acknowledge that it is everything you say of it; and in every case I have used it I have always felt that its action was speedy and sure.

From WM. ELLIS, Esq., M.R.C.S.

Morley, near Leeds, January 3rd, 1876.

The Liq. Secalis Ammon. has always been very decidedly beneficial in its results. I have administered it frequently and in large doses of two teaspoonfuls in water, and never witnessed in one instance any injurious effects. I believe, from experience, that a large dose of Secale should always be given, when that medicine is required. A second dose is never required.

From W. L'HEUREUX BLENKARNE, Esq., M.R.C.S.

Buckingham, September 20th, 1877.

After having given your Liq. Secalis Ammon. a long trial, I can speak in the HIGHEST PRAISE OF IT, and I never go to a confinement without some of it in my pocket.

The above Liquor is put up in ¼-lb., ½-lb., and 1-lb. Stopped Bottles. Price 3s., 5s., and 8s. 6d. each.

PREPARED ONLY IN THE LABORATORY OF

JOHN RICHARDSON & CO., Manufacturing Pharmaceutical Chemists, LEICESTER, ENGLAND.

CAUTION.—The large demand for, and great success of, our LIQ. SECALIS AMMON. has caused many systematic and unscrupulous imitations. The Profession is earnestly requested, if ordering through Wholesale Houses, to state distinctly that our preparation is wanted. It is sent out only in bottles labelled with our name and Trade Mark.

WHOLESALE AGENTS.—LONDON—Maw Son & Thompson. EDINBURGH—Mackay & Co.; Duncan & Flockhart. GLASGOW—Old Apothecaries' Co.; Jam & Taylor. DUBLIN—Apothecaries' Hall; McMaster, Hodgson & Co. BELFAST—Clark & McMullen; W. Collins. BRUSSELS—M. Crétien. MADRID—M. Argenta. ADELAIDE—Fanning & Co. MELBOURNE—Fellou, Grimwade & Co. SYDNEY—Elliott Brothers.



TRADE MARK.

ENEMAS



TRADE MARK.

LYNCH & CO.

Beg respectfully to draw the attention of the Trade to the following

Reduced Prices of their Enemas,

All of which they **WARRANT** to be of **BEST QUALITY** in their respective classes, and Solicit Orders:—

| | | £ | s. | d. |
|-------------------|--|---|----|----|
| 44. HIGGINSON'S | Green, White, or Black India Rubber, with Bone Rectum Pipe, Elastic Gum Vagina Pipe to plug on, and Patent Leather Shield in Slide Cedar Boxes per dozen | 1 | 14 | 0 |
| 44a. DITTO | Ditto, with disconnecting mounts " | 1 | 16 | 0 |
| 47. "FAMILY" | Green, White, or Black India Rubber, with Bone Seat Pipe, Elastic Gum Vagina Pipe and Elastic Gum Child's Rectum Pipe mounted with Bone Shield, all made to fit Screw Mounts, and with Patent Leather Shield in Slide Cedar Boxes per dozen | 2 | 2 | 0 |
| 46. DITTO | Ditto, in Mahogany Boxes " | 2 | 8 | 0 |
| 47b. "PERFECTION" | Green, White, or Black India Rubber, with Bone Seat Pipe, Elastic Gum Vagina Pipe and Elastic Gum Child's Rectum Pipe mounted with Bone Shield, all made to fit Screw Mounts, and with Patent Leather Shields and Disconnecting Mounts, fitted with Thumb Pieces, in Slide Cedar Boxes per dozen | 2 | 8 | 0 |
| 47a. DITTO | Ditto, in Mahogany Boxes " | 2 | 17 | 0 |
| 47c. DITTO | Ditto, in very superior Mahogany Boxes, with Lock and Key, per dozen | 3 | 12 | 0 |

LESS USUAL DISCOUNT.

Special Quotation to Buyers of One Dozen and upwards.

Original and Sole Manufacturers,

LYNCH & CO.,

71a & 171b Aldersgate Street, London, E.C.

INGRAM & ROYLE,

IMPORTERS OF NATURAL MINERAL WATERS, &c.,

119 QUEEN VICTORIA STREET, LONDON, E.C.

Warehouses: 226 and 227 UPPER THAMES STREET, E.C.

Wholesale only.

CITY DEPÔT
FOR THE
APOLLINARIS
WATER.

| | | IN LONDON. | | COUNTRY (carriage paid). | |
|-----------------------------------|------|------------|------------------------------------|--------------------------|--|
| Loose, 50 glass bottles .. | 22 | 22 | 24 | Cases | |
| Do. 100 " $\frac{1}{2}$.. | 35 | 35 | 38 | extra. | |
| Per Hamper of 50 glass bottles .. | 23 | 23 | 25 | | |
| Do. do. 100 " $\frac{1}{2}$.. | 36 | 36 | 39 | Hampers | |
| Do. do. 50 stone " .. | 22 | 22 | 25 | included. | |
| Do. do. 50 " $\frac{1}{2}$.. | 17/6 | 17/6 | 20 | | |
| Per dozen, glass or stone .. | 6/3 | 6/3 | bottles, 5/ $\frac{1}{2}$ bottles. | | |

5 per cent. discount on orders for 20 Hampers or Cases, or the equivalent loose. Smaller quantities strictly NET CASH. Apollinaris Bottles (Glass) and Cases allowed for when returned.

| NAME. | Per Dozen. | Per Orig. Pkg. | |
|---------------------------------|---------------------------|---------------------------|------|
| | Bots. $\frac{1}{2}$ Bots. | Bots. $\frac{1}{2}$ Bots. | |
| BILIN | 9/ | 36/ | |
| BIRMENS DORF | 12/ | 44/ | |
| BOURBOULE, LA | 11/ | 42/ | |
| CARLSBAD | 9/6 | 38/6 | |
| CONTREXEVILLE | 10/ | 36/ | |
| EMS | 8/ | 30/ | |
| † FRIEDRICHSHALL | 11/ | 7/6 | *26/ |
| † HUNYADI-JÁNOS | 16/6 | 13/6 | *30/ |
| KISSINGEN | 11/6 | 45/ | |
| KREUZNACH | 11/ | 26/ | |
| MARIENBAD | 10/ | 40/ | |
| MISSISQUOI | 25/ | 50/ | |
| OREZZA | 12/ | 28/ | |
| PULLNA | 12/ | 8/6 | *25/ |
| ROYAT | 9/ | 34/ | |
| SAINT GALMER (Natural) | 5/6 | 21/ | |
| SCHWALBACH | 8/ | 30/ | 24/ |
| SELTZER | 6/ | 22/ | 15/6 |
| TARASP | 12/ | 30/ | |
| VALS | 8/6 | 32/ | |
| VICHY (Sources de l'Etat) | 8/6 | 7/6 | 31/ |
| WILDUNGEN | 11/ | 43/ | |
| WOODHALL | 7/6 | 5/ | *20/ |

† FRIEDRICHSHALL:—10 cases and upwards shipped direct from Rotterdam at Reduced Prices, which can be had on application.

† Special discount on Hunyadi-János on orders for 10 cases.

| SALTS, &c. | | Per doz. |
|---|-----------------|----------|
| Carlsbad | bottles | 84/ |
| Do. | " | 42/ |
| Do. | " | 21/ |
| Kreuznach | " | 11/ |
| Do. | " jars | 60/ |
| Marienbad | bottles | 24/ |
| Vichy (for Drinking) | boxes | 42/ |
| Do. | bottles | 42/ |
| Do. (for Baths) | rouleaux | 10/ |
| Vichy Pastilles (assorted flavours) | large boxes | 12/ |
| Do. | small " | 6/ |
| Do. "Sucre d'Orge" (Barley Sygar) .. | large " | 18/ |
| Do. | small " | 9/ |
| Ems Pastilles | boxes | 12/ |
| Carlsbad do. | " | 12/ |
| Do. Soap | tablets | 12/ |
| Kreuznach Motherlye | bottles | 11/ |
| Woodhall do. | 4/3 per gallon. | |

CONTENTS OF ORIGINAL PACKAGES.

| | |
|--|---------------------------------|
| *Friedrichshall. 30 Bots. 60 $\frac{1}{2}$ Bots. | *Orezza..... 30 Bots. — 1 Bots. |
| *Hunyadi-János 25 " — " " | *Pullna..... 40 " 40 " |
| *Kreuznach 30 " — " " | *Tarasp..... 30 " — " |
| *Missisquoi 24 " — " " | *Woodhall .. 36 " — 72 " |

With the above exceptions, Original Packages contain 50 bottles each.

PRICE LIST OF ALL IMPORTED NATURAL MINERAL WATERS ON APPLICATION.

GADBURY'S COCOA ESSENCE

excess of fatty matter, and recommended by medical men as the most wholesome breakfast beverage.

"We have carefully examined the samples brought under our notice, and find that they are genuine, and that the Essence of Cocoa is just what it is declared to be by Messrs. Cadbury Brothers."—*Lancet*.

"Cocoa treated thus will, we expect, prove to be one of the most nutritious, digestible, and restorative of drinks."—*British Medical Journal*.

GUARANTEED PURE AND SOLUBLE.

DO NOT LET YOUR CHILD DIE!

Fennings' Children's Powders Prevent Convulsions; are Cooling and Soothing.

FENNINGS' CHILDREN'S POWDERS,

For Children Cutting their Teeth, to Prevent Convulsions.

Sold in Stamped Boxes, at 1s. 1½d. and 2s. 9d. (great saving), with full Directions.

Do not contain Calomel, Opium, Morphia, nor anything injurious to a tender babe.

Chemists, by applying to the Patent Medicine Houses and Wholesale Chemists, can obtain, free of any charge, a supply of "FENNINGS' EVERY MOTHER'S BOOK," for Counter distribution.

FOR

SODA-WATER MACHINERY,

CODD'S PATENT SODA-WATER BOTTLE,

In use by nearly 600 Mineral Water Makers.

THE "LONDON MADE" SYPHON.

SEND FOR

ILLUSTRATED CATALOGUE

TO

BARNETT, SON & FOSTER,

23rd Forston Street, Shepherdess Walk, London, N.



Guaranteed to be free from lead, and of the best finish throughout.

Price, 2s. each in quantities.

Name embossed on side of glass, 2d. each.

Stencil, 3s. to 5s.